

GENERAL CALENDAR

67-68

Loyola
OF MONTREAL

**Loyola
College
calendar**



RO Wilson-65

ARTS • SCIENCE • ENGINEERING • COMMERCE

Ad Maiorem Dei Gloriam



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7141 SHERBROOKE ST. WEST
MONTREAL, TEL. 482-0320

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ACADEMIC CALENDAR 1967-1968

SUMMER

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MAY

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JUNE

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WINTER

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OCTOBER

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JANUARY

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FEBRUARY

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APRIL

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academic calendar 1967-68

Saturday, July 15

Last day for returning preregistration form.

Last day for making application for supplemental examinations.

Last day for making appeal to repeat year.

Tuesday, August 15

Last day for accepting late applications to enter College.

Monday, August 7

Schedule for supplemental examinations will be posted at the College.

Monday, August 14

Supplemental examinations begin.

Wednesday, Thursday, September 20 and 21

Placement tests for Freshmen from the Montreal area : 9:30 A.M.

Monday, September 25

Payment of fees for Commerce I, Engineering I and Science I students : 9:00 A.M. to 12:00 Noon.

Registration of Commerce I, Engineering I and Science I students : 1:00 P.M.

Tuesday, September 26

Payment of fees for Commerce II, III and IV students : 9:00 A.M. to 12:00 Noon.

Registration of Commerce II, III and IV students : 1:00 P.M. to 5:00 P.M.

Freshman Orientation : 9:30 A.M.

Wednesday, September 27

Payment of fees for Arts II students : 9:00 A.M. to 12:00 Noon.

Registration of Arts II students : 1:00 P.M. to 5:00 P.M.

Freshman Orientation : 9:30 A.M.

Thursday, September 28

Payment of fees for Arts III and IV students : 9:00 A.M. to 12:00 Noon.

Registration of Arts III and IV students : 1:00 P.M. to 5:00 P.M.

Freshman Orientation : 9:30 A.M.

Friday, September 29

Payment of fees for Engineering II, III and IV and Science II, III and IV students : 9:00 A.M. to 12:00 Noon.

Registration of Engineering II, III and IV and Science II, III and IV students : 1:00 P.M. to 5:00 P.M.

Placement tests for Freshmen from outside the Montreal area : 9:30 A.M.

Saturday, September 30

Payment of fees for Arts I students : 9:00 A.M. to 12:00 Noon.

Registration of Arts I students : 1:00 P.M.

Monday, October 2

Lectures begin.

President's address to Upperclass students : 11:00 A.M.

Tuesday, October 3

Solemn Mass for the opening of the Academic Year — 12:00 Noon.

Monday, October 9

Thanksgiving Day — Full holiday.

Friday, October 13

Last day for late registration.

Friday, October 20

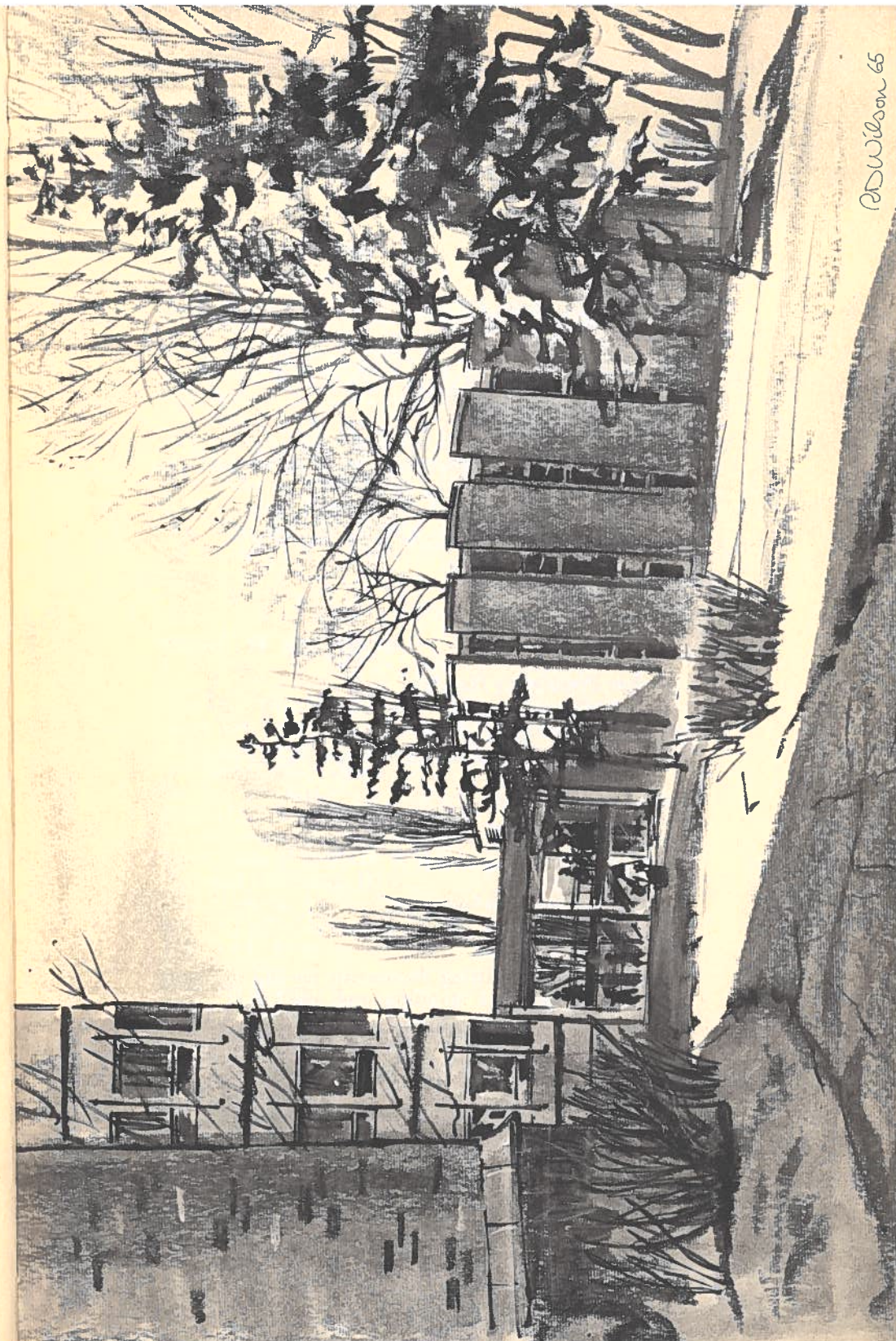
Last day for course changes.

Tuesday, October 31

Fall Convocation.

Friday, November 10

1:00 P.M. — Remembrance Day Services and Mass for deceased staff members and students.



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Friday, December 22

Last day of lectures before Christmas.

Wednesday, January 3

Lectures resume.

Monday, January 22

Mid-Year Freshman tests begin.

Thursday, January 25

First term lectures end.

Friday, January 26

Mid-Year final examinations begin in all faculties.

Friday, February 2

Last day for making application for Degree.

Monday, February 5

Second term lectures begin.

Friday, February 9

Father President's Holiday.

Tuesday, March 12

Celebration of the Feast of St. Ignatius Loyola.

Wednesday, April 10

Last day of lectures.

Tuesday, April 16

Final examinations begin.

Friday, May 17

Last day for submitting documents needed to justify appeal for aegrotat standing and special examinations.

Saturday, June 1

Convocation.
Last day for making application to enter College.

Saturday, June 15

Last day for making appeal to have an examination paper reviewed.

board of trustees

Very Rev. Patrick G. Malone, S.J., B.A., Ph.L., M.A., S.T.L., President
 Very Rev. Cecil C. Ryan, S.J., B.A., S.T.L., Superior
 Rev. Cyril B. O'Keefe, S.J., B.A., M.A., S.T.L., Ph.D.
 Rev. Robert, J. MacDougall, S.J., B.A., S.T.L., Treasurer.
 Rev. J. Aloysius Graham, S.J., B.A., M.A., S.T.L., Secretary
 Rev. John S. O'Neill, S.J., B.A., B.Paed., M.Sc.
 Rev. Hugh J. MacPhee, S.J., B.A., M.A., S.T.L.
 Mr. Timothy P. Slattery, Q.C., M.B.E., Legal Adviser

board of governors

The Hon. Mr. Justice Paul C. Casey, Chairman
 Very Rev. Patrick G. Malone, S.J., Vice-Chairman
 R. Ruder, Secretary to the Board
 Murray G. Ballantyne
 Stanley D. Clarke
 John H. Coleman
 Lieut-General Frank J. Fleury
 Hon. Louis P. Gélinas, M.B.E.
 F. Ronald Graham, Jr.
 H.J. Hemens, Q.C.
 Frederick R. Kearns
 Edward F. King
 C. S. Malone
 John McIlhone
 B. W. McNaughton
 Rev. Robert J. MacDougall, S.J.
 Herbert J. O'Connell
 Rev. Cyril B. O'Keefe, S.J.
 J. Harry Ranahan
 Salvatore Randaccio
 Timothy P. Slattery, Q.C.
 A. K. Velan
 Charles H. Wayland
 William H. Wilson
 J. M. Wynn

members of the senate

Ex-officio

Fr. P. G. Malone, S.J., (Chairman)
 Mr. J. W. Noonan, (Secretary)
 Fr. C. B. O'Keefe, S.J.
 Mr. L. Bessner
 Fr. A. Graham, S.J.
 Mr. G. Joly
 Mr. H. Charbonneau
 Fr. G. MacGuigan, S.J.
 Fr. G. McDonough, S.J.

Appointed

Mr. J. Doyle
 Fr. J. E. O'Brien, S.J.

Term ends

April 30, 1969
 April 30, 1968

Elected — Arts

Dr. F. G. W. Adams	April 30, 1968
Dr. M. Blonar	April 30, 1970
Mr. A. Lallier	April 30, 1969
Dr. A. E. Lauzière	April 30, 1969
Dr. R. C. Hinnars	April 30, 1968
Dr. D. Savage	April 30, 1970
Fr. E. O'Brien, S.J.	April 30, 1968
Mr. R. Wareham	April 30, 1970

Elected — Science

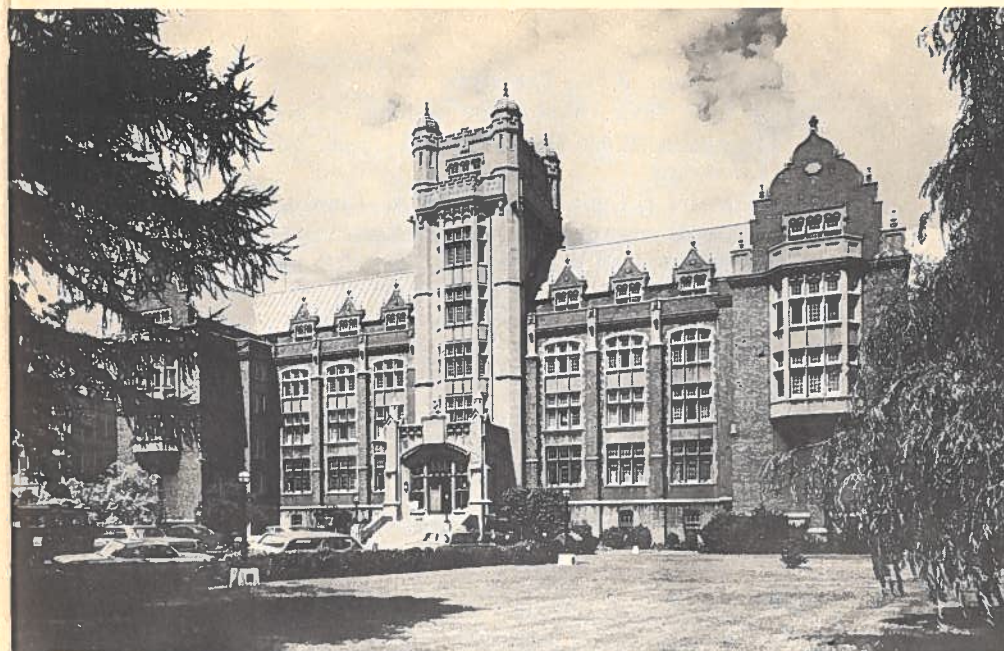
Dr. C. E. Eappen	April 30, 1969
Dr. T. Nogrady	April 30, 1970
Mr. A. Prillo	April 30, 1970
Fr. E. O'Connor, S.J.	April 30, 1968

Elected — Commerce

Mr. R. L. McGraw	April 30, 1968
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Elected Engineering

Mr. K. I. Krakow	April 30, 1968
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LOYOLA COLLEGE-ADMINISTRATION BUILDING

officers of administration

Very Rev. Patrick G. Malone, S.J., B.A., Ph.L., M.A.,
 S.T.L., President
 R. Duder, B.A., M.A., Assistant to the President
 Rev. C. B. O'Keefe, S.J., B.A., M.A., S.T.L., Ph.D.,
 Dean of Studies
 W. J. Cozens, B.A., Assistant to the Dean and
 Director of Freshmen
 Rev. G. J. MacGuigan, S.J., B.A., M.A., S.T.L., As-
 sociate Dean of Arts
 Rev. J. A. Graham, S.J., B.A., M.A., S.T.L.,
 Associate Dean of Science
 M. L. Bessner, B.Comm., L.A., C.A., Associate
 Dean of Commerce
 G. W. Joly, B.A., B.Eng., M.Eng., Associate
 Dean of Engineering
 H. Charbonneau, M.A., L.Ph., Director of Evening
 Division
 Rev. R. J. MacDougall, S.J., B.A., S.T.L., Treasurer
 Rev. J. G. McDonough, S.J., B.A., M.A., Dean of
 Students

J. W. Noonan, B.Sc., Registrar
 Major J. P. Hale, Supervisor Guidance Centre,
 G. Trowsdale, B.A., (Lib.Sc.), Lib. Cert., Chief Librarian
 A. J. Ferrari, B.Comm., C.A., R.I.A., Comptroller
 J. Stirling Dorrance, B.A., M.A., Director of Development

administrative offices

Registrar :

J. W. Noonan, B.Sc., Registrar
 T. A. Murphy, B.Comm., Associate Registrar
 Miss E. Gibbons, Assistant Registrar (Records)
 J. R. Britt, B.Comm., Assistant to the Registrar

Finance and Business :

Rev. Robert J. MacDougall, S.J., B.A., S.T.L., Treasurer
 A. J. Ferrari, B.Comm., C.A., R.I.A., Comptroller
 C. Ville Maire, C.G.A., Assistant to Comptroller
 Mrs. E. Detlor, R.I.A., Accountant
 A. St. Amour, Bursar
 R. J. Lennen, Director of Purchases
 L. Price, Director of Residence and Food Services
 P. Gore, Manager of Bookstore
 G. Leduc, Manager of Auditoria

Dean of Students :

Rev. J. G. McDonough, S.J., B.A., M.A.
 Dean of Men
 Miss A. McDonald, B.A., M.A., Dean of Women
 D. Clark, B.A., M.A., Dean of Residence
 P. Lefebvre, Director of Financial Aid
 E. Steynor, B.A., Student Placement Officer
 E. F. Enos, B.Sc., B.A., Director of Physical Education
 Major J. R. Rousseau, Loyola College, C.O.T.C.
 Rev. J. S. O'Neill, S.J., B.A., B.Paed., M.Sc., Student Counsellor
 G. V. Uihlein, Jr., B.Sc., M.Sc., Assistant Dean of Men
 A. Powell, M.D., Director of Medical Services
 Miss M. Frazer, R.N. Nurse

Director of Development :

J. Stirling Dorrance, B.A., M.A.
 B. H. McCallum, B.A., Director of Alumni Affairs
 E. Williams, B.A., B.C.L., Publications Officer

Chief Librarian :

G. Trowsdale, B.A. (Lib.Sc.), Lib. Cert.
 J. Princz, B.A., M.A., Deputy

Maintenance Co-ordinator :

Rev. R. J. MacDougall, S.J., B.A.
 L. Provost, Maintenance Superintendent

New Buildings Supervisor :

Rev. E. J. Sherry, S.J., B.A., M.A.

Loyola College Faculty Association

Pres. : J. Terry Copp
 Vice-Pres. : Katherine Waters
 Sec. : Daniel Brown
 Treas. : Robert Hanrahan

faculty list — 1967-68

ADAMS, F.G.W., B.A. (Toronto), M.A. (Toronto), Ph.D. (Chicago), Associate Professor and Chairman, Department of History.

ALVI, S., B.A. (Karachi), M.A. (Karachi), Ph.D. (Colorado), Assistant Professor, Department of Economics.

ANDERSEN, G.W., B.A. (Horsens Stateskole, Denmark), B.Ed. (Denmark), M.A. (Montreal), Assistant Professor, Department of French Studies.

ANDERSEN, Mrs. M., Certificat d'Etudes Littéraires (Paris), Diplôme d'Etudes Supérieures (Free University of West Berlin), Ph.D. (Montreal), Assistant Professor, Department of French Studies.

APCZYNSKI, J.V., B.A. (St. John's College, Arkansas), Sessional Lecturer, Department of Theology.

BAGCHI, S.N., B.Sc. (Calcutta), M.Sc. (Calcutta), D.Sc. (Calcutta), Professor, Department of Physics.

BANNISTER, W., B.A. (University of Western Ontario), M.A. (Western Ontario), Lecturer, Department of Business Administration.

BARBERIS, R., B.A. (Montreal), S.T.L. (Montreal), Lecturer, Department of Theology.

BARTHO, A., Diplômé Ecole Normale Supérieure de Saint-Cloud, Sessional Lecturer, Department of French Studies.

BASHCONJI, G., B.Sc. (University of London), Lecturer, Department of Mathematics.

BAUER, J.H., B.A. (Sir George Williams), M.A. (Manitoba), Assistant Professor, Department of Psychology.

BEDARD, W., O.F.M., B.A. (Montreal), S.T.D. (Catholic University of America), Assistant Professor, Department of Theology.

BENDER, J., A.B. (Mount St. Mary's College), A.M. (Catholic U. of America), Ph.D. (Johns Hopkins), Visiting Prof. Department of Sociology.

BENJAMIN, I., B.Sc. (Rostov), D.Sc. (Prague), Associate Professor, Department of Mathematics.

BERETTA, G.W., B.A. (Western Ontario), L.Ph. (Louvain), Lecturer, Department of Philosophy.

BERNS, T., B.A. (St. Mary of the Lake), M.A. (Marquette), Lecturer, Department of English.

BESSNER, L.M., B.Comm. (McGill), L.A. (McGill), C.A., Associate Professor and Associate Dean of Commerce.

BLACKLOCK, J.L., B.A. (University of Western Ontario), Instructor, Department of English.

BLANAR, M., B.A. (Montreal), B. Paed. (Montreal), M.A. (Montreal), Ph.D. (Montreal), Associate Professor, Department of English.

BOUCHER, J.-P., B. ès A. (Montreal), M.A. (McGill), Lecturer, Department of French Studies.

BOYLE, L.J., B.A. (University of Montreal), B.Comm. (Montreal), M.A. (McGill), Lecturer, Department of Business Administration.

BRASH, Miss M.H., B.A. (Bishop's), Instructor, Department of English.

BRODY, B., B.A. (Sir George Williams), M.A. (McGill), Asst. Prof. Department of Economics.

BROES, A., B.A. (Manhattan College), M.A. (Columbia), Assistant Professor, Department of English.

BROWN, D., A.B. (Xavier University), Assistant Professor, Department of Classics.

BROWNE, W.J., S.J., B.A. (Montreal), S.T.L. (Regis, Toronto), S.T.D. (Gregorian), Assistant Professor, Department of Theology.

BUELL, J., B.A. (Montreal), M.A. (Montreal), Ph.D. (Montreal), Professor, Department of Communication Arts.

CASEY, P., B.A. (University of Montreal), B.C.L. (McGill), Sessional Lecturer, Commercial Law.

CATRY, Miss M., Certificat d'Etudes Littéraire (Lille), Certificat de Pédagogie (Lille), M.A. (Mount Holyoke), Lecturer, Department of French Studies.

CHARPENTIER, G., B. ès A. (Laval), L. ès L. (Laval), Lecturer, Department of French Studies.

CHOWN, E.H., B.Sc. (Queen's), M.A.Sc. (British Columbia), Ph.D. (Johns Hopkins), Assistant Professor, Department of Geotechnical Science.

CLARK, D.R., B.A. (St. Joseph's, College, Collegeville), M.A. (Fordham), Sessional Lecturer, Department of Communication Arts.

COLLINS, J., B.A. (Duquesne), Lecturer, Department of Theology.

COOLIDGE, R.T., B.A. (Harvard), M.A. (Berkeley), B. Litt. (Oxford), Assistant Professor, Department of History.

COPP, J.T., B.A. (Sir George Williams), M.A. (McGill), Assistant Professor, Department of History.

COSTA, J., B.Sc. (Collegio Vescovile, Italy), M.A. (Seton Hall), Lecturer, Department of Modern Languages.

COYTE, R.C., B.A. (Oxford), Diploma in Political Science and Economics (Oxford), M.A. (Oxford), Assistant Professor, Department of Political Science.

CRONIN, R.T., S.J., B.A. (Montreal), M.Sc. (Fordham), Ph.D. (Fordham), Assistant Professor, Department of Biology.

DAI, P., B.A. (University of Shanghai), Ph.D. (Johns Hopkins), Visiting Professor, Dept. of Political Science.

DAUDERIS, H. J., B.Comm. (University of Montreal), Lecturer, Department of Accountancy.

DAUVERGNE, J., B.B.A. (Missouri), M.A. (Fletcher School of Law), M.A.L.D. (Fletcher), Assistant Professor, Dept. of Economics.

DAVIES, P., B.A. (Northern Illinois), M.A. (Illinois), Assistant Professor, Dept. of English.

DeTAKACSY, N.G., B.Sc. (Montreal), M.Sc. (McGill), Ph.D. (McGill), Assistant Professor, Dept. of Physics.

DHINDSA, K.S., B.Sc. (Panjab), M.Sc. (Panjab), Assistant Professor, Dept. of Biology.

DOUGHTY, M., B.Sc. (London), Ph.D. (London), Assistant Prof., Department of Chemistry.

DOYLE, J.P., B.A. (Montreal), B. Paed. (Montreal), M.A. (Montreal), Associate Professor and Chairman of the Department of Philosophy.

DRUMMOND, S., S.J., B.A. (Montreal), M.A. (Toronto), S.T.L., Ph.D. (Toronto), Professor and Chairman, Department of Biology.

EAPPEN, C.E., B.Sc. (Travancore), M.Sc. (Bombay), Ph.D. (McGill), Associate Professor and Acting-Chairman, Dept. of Physics.

EGAN, E., B.A. (Manhattan College), M.A. (Fordham), Assistant Professor, Dept. of Philosophy.

EKLER, K., B.Sc. (McGill), Ph.D. (McGill), Associate Prof., Department of Chemistry.

FAIERMAN, M., B.Eng. (McGill), B.Sc. (University of London), M.A. (University of Toronto), Ph.D. (Toronto), Assistant Professor, Department of Mathematics.

FAINSILBER, H., B.Sc. (Sir George Williams), Lecturer, Dept. of Mathematics.

FAULKNER, T.C., A.B. (Hope College), M.A. (Miami University at Ohio), Lecturer, Department of English.

FAYGEL, G., B.Sc. (University of Toronto), Lecturer, Department of Mathematics.

FORD, K., B.Sc. (University of Montreal), M.Sc. (University of Connecticut), Lecturer, Department of Physics.

GAGNON, C.F., Guest Artist and Special Lecturer, Department of Communication Arts.

GARNET, P., B.A. (Sheffield), M.A. (Sheffield), Lecturer, Department of Theology.

GERVAIS, M., S.J., B.A. (Montreal), L.Ph. (Immaculate Conception), M.F.A. (Catholic U. of America), M.A. (St. Mary's), Assistant Professor, Department of Communication Arts.

GOLD, Mrs. L., B.A. (Sir George Williams), M.A. (McGill), Instructor, Department of English.

GOLDMAN, C., B.Eng. (McGill), M.Eng. (McGill), Associate Professor, Department of Engineering.

GRAHAM, A., S.J., B.A. (Montreal), M.A. (Toronto), S.T.L. (Gregorian), Associate Professor and Chairman, Department of Chemistry, Associate Dean of Science.

GRAY, C.B., A.B. (St. Bonaventure), M.A. (Catholic U. of America), Lecturer, Department of Philosophy.

HABIB, H.P., B.A. (American University of Beirut), M.A. (Fordham), Ph.D. (McGill), Associate Professor and Chairman, Dept. of Political Science.

HANRAHAN, J.R., B.Comm. (St. Mary's), M.B.A. (Harvard), Assistant Professor and Chairman, Department of Business Administration.

HARTMAN, Rabbi D., B.A. (City College, New York), M.A. (Fordham), Sessional Lecturer, Department of Theology.

HAYES, F.J., B.Sc. (London), Ph.D. (McGill), Associate Professor and Chairman, Department of Economics.

HENKEY, Rev. C., B.C.L. (Gregorian), S.T.D. (Gregorian), Ph.D. (Gregorian), Professor and Chairman, Department of Theology.

HERSKOWITZ, D.S., B.S., (N.Y.C.), Assistant Professor, Department of Economics.

HEWSON, C.G., B.A. (McGill), Lecturer, Department of Mathematics.

HINNERS, R.C., B.A. (Harvard), M.A. (Toronto), Ph.D. (Toronto), Associate Professor, Department of Philosophy.

HOEY, T., S.J., B.A. (Montreal), M.A. (Toronto), S.T.L. (Regis, Toronto), Ph.D. (Harvard), Associate Professor, Department of Classics (on leave of absence).

HOFBECK, J., B.A. (Institut Catholique, Paris), S.T.L. (Institut Catholique, Paris), Assistant Professor, Department of Theology.

HOOPER, A.G., B.A. (Leeds), M.A. (Leeds), Ph.D. (Leeds), Professor, Chairman, Department of English.

HUBBARD, W.H., B.A. (Oregon), Lecturer, Department of History.

JACK, Miss B.A., B.A. (McGill), Instructor, Department of English.

JENKINS, J., B.Sc. (McGill), M.Sc. (McGill), Assistant Professor, Department of Geotechnical Science.

JOLY, G.W., B.A. (Montreal), B.Eng. (McGill), M.Eng. (McGill), Professor and Chairman, Department of Engineering and Associate Dean of Engineering.

JONES, P., L.Ph. (Gregorian University), S.T.L. (Gregorian), Lecturer, Department of Theology.

JOOS, E., B.A. (Budapest), M.A. (McGill), L.Ph. (Montreal), Lecturer, Department of Philosophy.

JOPE, J., A.B. (Boston College), M.A. (Princeton), Assistant Professor, Department of Classics.

KAWAJA, P., B.Comm. (McGill), M.B.A. (Columbia), Assistant Professor, Department of Business Administration.

KAWCZAK, A.S., L.L.M., M.A. (Cracow), Ph.D. (Warsaw), Associate Professor, Department of Philosophy.

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history of Loyola College

The origins of Loyola College may be traced to the opening of the Collège Ste-Marie in 1848, which resumed in Montreal the work of the historic Jesuit College of Quebec, opened in 1635. From its conception the classical course at the College began with both languages, French and English, on an equal footing. From 1888 to 1896 the classical course in English was operated as distinct from that in French, both considered separate units within one institution.

On September 2, 1896, Loyola College was opened at 2084 St. Catherine Street West, but only on February 2, 1899 was *Loyola College* incorporated by an Act of the Quebec Legislature. It had its origin in the separate course, inaugurated ten years earlier, for the English-speaking students at Collège Ste-Marie. On February 5, 1899, Laval University officially extended its Bachelor of Arts degree to Loyola students under the special privileges granted by the Holy See in its Constitution *Jamdudum*, and the first degrees were awarded by Laval in 1903. A similar arrangement was made with the University of Montreal when it was established. In consequence of these arrangements, Loyola was assured of complete autonomy and independence in the shaping of its curriculum and in the conducting of its examinations in Arts courses, degrees being granted by the University of Montreal. Loyola instituted its Faculty of Science in 1943 and

its Faculty of Commerce in 1948. All courses in the three faculties are conducted at the College, and by special arrangement the University of Montreal grants B.Sc. and B.Comm. degrees to students who have successfully completed their courses in these faculties. The curriculum and examinations of these courses, however, are under the control of the University.

Since the early days of Loyola, many changes have occurred, especially evident in the evolution of curriculum which more and more set the College in the Anglo-Canadian tradition. For instance, the eight-year course was broken up into two distinct four-year units (1919) and options were introduced (1921), confirming three distinct courses, at least in the last two years of college; Arts (General), Arts (Pre-Medical), Arts (Pre-Science).

In 1943 other changes were initiated which transformed Loyola into the developed academic institution it is today. A distinct Faculty of Science was established, offering Honours Chemistry and Honours Physics; the first three years of Engineering were introduced in Civil, Mechanical, Mining, Chemical, and Metallurgical Engineering; major fields in Economics, English and History were established in 1953 and in Theology in 1962.

Honours Courses in Economics, English and History were initiated in 1958 and in Theology in 1963. An Extension Department, since renamed the Evening Division, and a Summer School were founded in 1957 to fill the need of those unable to pursue their studies during the day and thus provide a public service.

The academic world soon recognized the new status of Loyola: the Chemical Institute of Canada (CIC) approved the Honours Chemistry programme as fulfilling all the requirements for professional standing in its Institute; the Engineering Institute of Canada (EIC) recognized the competence of the Loyola Engineering Department; the Institute of Chartered Accountants of Quebec accepted the work done in the Commerce course, a major in Accounting, and granted the same privileges to Loyola graduates as were conferred on graduates of other older institutions; the Canadian Conference of Canadian Universities and Colleges accepted Loyola as an autonomous member. All faculties of the College have pre-

pared students for and have sent them to the graduate schools of American, British and Canadian universities, which have conferred Engineering, Master's and Doctoral degrees on them.

The growth of Loyola has made noticeable changes; for example there are now four faculties and twenty-one departments; the number of lay members of the staff has increased very greatly; and, there has been a very ambitious building programme established to provide the necessary physical facilities.

The rising importance of the Extension Department and the Summer School necessitated a revaluation of the programme in the course of which the Extension Department was renamed Evening Division of Loyola College and became more closely integrated with the Day Division of the College. The Summer School has retained its basic structure, but day courses were offered for the first time during the summer of 1964.

Further information about the work of these two divisions may be obtained from the Director of the Evening Division.

aim of Loyola College

The aim and purpose of Loyola College has been well stated by John Henry Cardinal Newman in a Sermon preached in the University Church at Dublin entitled "Intellect, the Instrument of Religious Training" in which he states:

... I wish the intellect to range with the utmost freedom, and religion to enjoy an equal freedom, but what I am stipulating for is, that they should be found in one and the same place. (i.e., religion and science) and exemplified in the same persons ... wish the same spots and the same individuals to be at once oracles of philosophy and shrines of devotion.

It will not satisfy me, what satisfies so many, to have two independent systems, intellectual and religious, going at once, side by side, by a sort of division of labour, and only accidentally brought together. It will not satisfy me, if religion is here and science there, and young men converse with science all day, and lodge with religion in the evening. It is not touching the evil, to which these remarks have been directed, if young men eat, and drink and sleep in one place, and think in another; I want the same roof to contain both the intellectual and moral discipline.

Devotion is not a sort of finish given to the sciences; nor is science a sort of feather in the cap, if I may so express myself, an ornament and set-off to devotion. I want the intellectual layman to be religious, and the devout ecclesiastic to be intellectual . . .

Sanctity has its influence; intellect has its influence; the influence of sanctity is the greater on the long run; the influence of intellect is greater at the moment. Therefore in the case of the young, whose education lasts a few years, where the intellect is, there is the influence. Their literary, their scientific teachers, really have the forming of them . . .

This is Loyola's reason for existence; this is Loyola's aim.



DRUMMOND SCIENCE LIBRARY

facilities

BUILDINGS Loyola College is located on a fifty-acre site in the west end of Montreal. The structures of the College are: the Refectory Building (built in 1916); the Administration Building (1927); the Stadium and Cafeteria (1923); the Chapel and Auditorium (1933); the Central Building (1947); the Drummond Science Building (1962); Hingston Hall (1963); the George P. Vanier Library (1964); the Physical Education Centre (1966); and buildings acquired to serve as residences, faculty, administration and student government offices (1966-67).

LECTURE ROOMS The 25 lectures rooms have a total seating capacity of 1,600. The amphitheatre in the Drummond Science Building can seat 350 students; the auditorium has a seating capacity of 750.

LABORATORIES About 60,000 square feet of floor space is devoted to science laboratories, shops, and offices. In addition, there are five engineering laboratories, a fully-equipped language laboratory, and a computer room housing an IBM 1620 Data Processing System and associated equipment.

MAIN CHAPEL The College Chapel has a seating capacity of about 500.

RESIDENCE The new residence, Hingston Hall, provides accommodation for 300 students.

LIBRARY The Georges P. Vanier library was opened in 1964 and provides students with one of the most modern and well-equipped libraries in Greater Montreal. The building will have an ultimate capacity of 180,000 volumes, spread over all three floors.

In the basement we have a well-equipped lecture hall with projection room and seating accommodation for 84, student lounge, faculty and staff lounges, and typing rooms.

The main floor contains the circulation desk, main reading area, card catalogue, and library offices.

The second floor contains four seminar rooms, audio-visual room, periodicals collection, the D'Arcy McGee collection, and the African Studies collection. There are research rooms for the use of professors and students engaged upon special projects.

There is a total seating accommodation for 600 students. The Science Library is situated in the Drummond Science Building and serves the faculties of Biology, Chemistry, Engineering, Geotechnical Science, Mathematics and Physics.

The Library hours are as follows :

VANIER LIBRARY

Monday to Friday	8:30 a.m. to 10:15 p.m.
Saturday	9:00 a.m. to 5:00 p.m.

SCIENCE LIBRARY

Monday to Thursday	8:30 a.m. to 5:00 p.m.
	7:00 a.m. to 10:00 p.m.
Friday	8:30 a.m. to 5:00 p.m.

The libraries are closed on all legal holidays.

income and needs of the college

The replacement value of Loyola College in buildings and educational equipment is in excess of thirty million dollars. The development plan for Loyola College to 1975 includes the recently completed Physical Education Centre, a student centre, additions to laboratory and classroom facilities, a faculty residence, an engineering building and residences for men and women.

THE CAPITAL DEVELOPMENT PROGRAMME Continual building needs call for continuing capital development support from individuals, business and industry throughout Canada. Current construction plans include added classroom and laboratory space, residence facilities, engineering building, athletic centre and Student Centre.

THE FACULTY ENDOWMENT FUND The need to keep pace with the growing demands for increased faculty membership of the highest qualification can be met only if an endowment fund of substantial size is available to supplement current revenue and grant funds.

THE VANIER LIBRARY ENDOWMENT FUND Contributions provide for the growth of Library holdings and facilities at Loyola commensurate with student study and research needs.

SCHOLARSHIP AND BURSARY ENDOWMENT Loyola receives continuous requests from talented and worthy students for financial aid. Both Annual and Funded scholarships and bursaries are sought to meet this need.

THE INSURANCE ENDOWMENT FUND A relatively small Life Insurance premium payment each year out of current Income can provide a gift to Loyola of substantial size. The death of the donor will not interrupt the completion of the gift, nor will the estate of the donor be diminished for the rest of the family.

THE ALUMNI ANNUAL FUND FOR LOYOLA Annual giving by Alumni represents the largest single source of support to universities and colleges in North America. A regular yearly contribution to the Loyola Alumni Association supports a variety of aid programmes to Loyola College and her students. For full information and additional printed material please contact the Development Office.



GUADAGNI MEMORIAL LOUNGE

division of student services

While the College gives primary emphasis to formal learning through instruction and study in an enriched curriculum, it clearly recognizes that, in the complete education of the whole person, the student has many other needs — religious, personal, athletic, social — for which it must make provision. To serve these needs the College offers a broad programme of student services. Within the framework of this non-instructional but nevertheless truly educational sphere of college life, the student has ready access to educational, spiritual, and vocational guidance.

The Student Services programme complements the student's formal learning process by providing such educational experiences as are not ordinarily found in the laboratory and the lecture hall.

Within the orbit of Student Services are included the departments of the Dean of Students, the Dean of Men and Assistant Dean of Men, Dean of Women, Director of Women's Residence, Chaplain, Director of Physical Education and Athletics, Director of Financial Aid, Dean of Residence, Director of Placement Services, Director of Health Services.

THE DEAN OF STUDENTS is responsible for the supervision and coordination of all those phases of student life and activity which are not instructional.

THE DEAN OF MEN, in the absence of the Dean of Students, supervises the Division of Student Services.

He serves as the representative of the President of Loyola College to the Loyola Students Association and its executive and Board of Directors. He serves as an advisor to the Arts Faculty Association and the Commerce Students Association with the Associate Dean of Arts and the Director of Commerce. He strives to promote the educational value of responsible student action in student self-discipline. He is available to all male students for personal conferences and strives to assist male students whenever possible. He acts as advisor to all men's organizations on campus. He serves as a member of the college committees pertaining to areas of student life.

THE ASSISTANT DEAN OF MEN helps the Dean of Men in disciplinary matters, and acts as advisor to foreign students; as advisor to fraternities and the Interfraternity Council; as advisor to the Science Student Council and the Engineering Student Council, with the respective deans of those faculties.

THE DEAN OF WOMEN acts as advisor to the Loyola Women Students Association and all other women's organizations on campus. She is available to all women students for personal conferences and strives to assist women students whenever possible.

She is directly concerned with the establishment of policy and procedure regarding on and off campus housing for women, and acts as the chief administrative officer in this area. Through the promotion of lectures and guest speakers she endeavours to present programmes of value and interest to women students. Her role as disciplinarian is centered around the educational value of responsible student action. She is a member of the college committees pertaining to areas of student life.

THE CHAPLAIN is responsible for programming the religious activities that are part of the University programme. He is also student counsellor and coordinator of those who are engaged in religious counselling.

THE DIRECTOR OF PHYSICAL EDUCATION AND ATHLETICS is responsible for college, inter-college and intramural programmes, and there are programmes of an instructional nature in physical education and recreation.

THE DIRECTOR OF FINANCIAL AID is responsible for all loan and bursary applications, either Government or Loyola College. In addition all Scholarship applications must be made through his office in his capacity as Executive Secretary of the Scholarship Committee. All students with financial problems should apply for advice and aid through his office. Student Insurance problems as well as Foreign Student insurance should be brought to this department. It is his responsibility to verify financial position of all foreign candidates for admission. He also acts as co-ordinator for all gifts and prizes for Convocation.

THE DEAN OF RESIDENCE is responsible for all on and off campus men's student housing. He should be contacted by students who desire information with regard to all off campus men's housing. In his responsibilities for on campus housing, the Dean of Residence serves as advisor to the Residence Administrative Council, and is available to provide assistance to all residence students in matters which they wish to bring to him for discussion and/or solution.

THE DIRECTOR OF PLACEMENT SERVICES has available information regarding permanent, summer, or part-time employment. The Placement Service is operated by Canada Manpower Services.

THE DIRECTOR OF STUDENT HEALTH SERVICES is responsible for the Student Health Services programme at the college.

THE STUDENT HEALTH SERVICE, organized in 1966, strives to promote the health, both physical and mental, required to live a full student life in the University community. Staff is a full-time nurse and a part-time physician. It is planned to add a part-time psychiatrist to the staff in the coming year. Should hospitalization be necessary this is arranged in a community hospital.

The aim of the STUDENT HEALTH SERVICE is prevention of illness and ensuring of health. With these objectives in mind a compulsory medical examination is required of all freshmen on initial enrollment at the college prior to registration. Annual chest X-Rays will be performed on all students at registration. Further health aids are proposed such as health lectures and seminars.

AN ACCIDENT INSURANCE PLAN giving protection against medical bills incurred as a result of an accident on or off campus, 24 hours a day and 12 months a year, has been initiated by a motion passed in the Lower House of Loyola of Montreal Students' Association on February 23, 1967. Participation in this insurance is a requirement of registration. Married and foreign students as well as those who wish to add sickness to their Accident Policy may consult the Office of the Director of Financial Aid.

STUDENT ACTIVITIES ELIGIBILITY. Although all full-time students of Loyola College who have paid their student activity fee for the academic year are members of the Student Association, they are

subject to the following eligibility rules in order to hold executive or elective office in the Loyola of Montreal Student Association: 1) they must have shown satisfactory evidence of good conduct as certified by the respective Dean of Men or Dean of Women; 2) they must have shown satisfactory evidence of scholastic application for the previous and/or current academic year as certified by the respective Director of Freshmen or Department Chairman, and they must remain in good academic standing; 3) they must not be under censure at the time of election or appointment; and 4) they must meet any additional requirements established by the government of the Student Association.

COLLEGE RULES AND REGULATIONS. The responsibility for maintaining discipline at the College is vested in the Dean of Students and his assistants, the Dean of Women and the Dean of Men, who investigate any instances involving misconduct. They, in turn, may refer cases to the Judiciary Board. Penalties for breach of discipline may range from reprimand to dismissal from the College.

The maintenance of discipline, in every sense, requires that each student assume responsibility for his actions, respect constituted authority, protect both private and public property, conduct himself at all times with propriety, and exhibit conduct both on and off campus which is becoming to a Loyola student. This clearly implies that the rights of others are to be respected.

Your attention is invited to the fact that registration at the College involves the students acceptance of not only the published academic regulations, but also all rules found in any official announcement.

Student Government

The Student Administrative Council is the incorporated governing body of the Student Association, of which all full-time day students are members.

Its general purpose is to : a) form a representative association to promote the educational, social and cultural interests of its members; b) form a representative association to promote the general welfare of its members; c) co-operate with other organizations, whether incorporated or not, having similar interests in promoting student activities.

The SAC is composed of three elements: the Executive, the Board of Directors, (legislative body), and the Senate (judicial body).

A Student Activity Fee, collected from day students at registration, finances the SAC.

The Executive

The President, Vice-President for Internal Affairs, Vice-President for External Affairs, Vice-President for Educational Affairs, Secretary and Treasurer form the Executive of the SAC. The President and Vice-President for Internal Affairs are elected annually on a ticket basis, and it is they who appoint the other four members of the Executive.

The Executive forms the core of the Executive Council, which is also composed of: Dean of Men, Athletic Association President, Resident Administrative Council President, News Editor-in-Chief, Inter-Fraternity Council President, International Students' President, Women's Association President, Faculty Presidents' Representative, and External P. R. Chairman.

The task of the Council is to advise the Executive with regards to the many problems encountered in the policy and decision-making of the Student Association.

The Senate

The judicial body of the SAC, the Senate, is composed of seven members elected by the Board of Directors from a slate prepared by the outgoing Senate.

Only students in third or fourth years are eligible for election, and there must be at least three members from each of these years.

The Senate is the body in the SAC which has judicial jurisdiction over any matters affecting either student discipline or constitutional interpretation. Should an organization or student dishonour or damage the reputation of the Student Association or the College, or violate any regulations of the University Community, in any way or in/at any activity sponsored by the SAC, the Senate has the power to fine those concerned; or suspend, or even expel them from the Student Association.

The Board of Directors

The Board of Directors is the legislative body of the SAC. Sixteen members are elected annually as voting members of the Board, in proportion to faculty enrollment. Their primary purpose is the regulation and co-ordination of the policies and activities of the Association in the best interests of the students.

The Board directs the programmes of the Student Association; implements its decisions; maintains its finances; and is, in general, the sole representative of the Association before the Administration of Loyola, before the general public, and before any party having business with students as a group. The non-voting members of the Board include the Chairman, Secretary, Senate Representative, Fr. President's Representative, Publicity Director, and the SAC Executive (excepting the President and Vice-President for Internal Affairs).

SAC Committees

The workload undertaken by the SAC each year is so enormous that committees are formed to bear a large portion of the burden. The committee chairmen are appointed by the SAC Executive, which receives applications and interviews interested students in late spring. The members of the committees are then appointed by the chairman.

The types of committees range from those undertaking and organizing special events, to those in charge of a specialized political or administrative area of student government. A few examples of SAC Committees would be Freshman Reception, Carnival, Leadership Conference, and Social Works.



HINGSTON HALL RESIDENCE

Publications

In 1966 the Board of Directors turned over publishing rights to the Board of Publications, whose primary function is to affirm and ensure free responsible student press.

The Board is composed of five voting members, with jurisdiction over the LOYOLA NEWS, the official student newspaper, the REVIEW, the student yearbook, AMPHORA, the literary magazine, the STUDENT HANDBOOK, the STUDENT DIRECTORY, and all other minor campus student publications.

Social Activities

The chief social events of the year take shape in the Freshmen week, Home-coming Week, The Athletic and the Faculty dances, the Winter Carnival, and the SAC and LCAA Awards Banquets.

Societies and Organizations

There are over forty organizations on campus which vary in nature and scope from academic, ethnic, dramatic and musical to professional, political, recreational and special interest. A few examples of these organizations would be Commerce Society, Debating, and Political Science Students Association.

Drama Society

The purpose of the Drama Society is to actively promote interest in drama on campus, and specifically to produce several productions during the academic year.

Past years' productions have included Steinbeck's *Of Mice and Men*, Ben Johnson's *Volpone*, and an adaptation of Shakespeare's *Julius Caesar* and James Hassinger's *Exit Pursued by a Bear*. In the last academic year, the Drama Society produced "A Country Wife" and "Miss Julie".

Fraternities and Sororities

Loyola, at present, has three permanently recognized fraternities on campus; the Kappa Chi chapter of the international fraternity, Tau Kappa Epsilon; Theta Sigma and Sigma Delta Phi. There is presently one fraternity with probationary recognition Delta Epsilon Rho.

Fraternities, their establishment on campus, and their general direction are governed by an Inter-fraternity Council.

Loyola also has two sororities — Phi Delta and Lambda Pi Epsilon. There are hopes of an Inter-sorority Council being set up, to accommodate their needs.

Physical Education and Athletics

Loyola boasts the most complete and diversified college athletic and physical education programme of its type in Canada. This programme operates as an integrated segment of the school's total curriculum aiming to promote a high degree of physical fitness and mental alertness amongst the entire student body. It is vitalized by a full-time staff of professionally trained coaches. Thirty-five activities are offered encompassing all popular and individual sports. In major areas of interest there are four different levels of play and instruction, intercollegiate varsity, intercollegiate junior varsity, intramural, and physical education classes. Loyola varsity squads play a full schedule against top Canadian and regional United States college teams. A million and a half dollar physical education centre houses an ultra-modern rink, gymnasium and multifarious training, exercise, and dressing rooms.

Loyola College Athletic Association

The primary purpose and responsibility of the Loyola College Athletic Association and that of its executive is assisting the Athletic Director in the promotion of the athletic programme. However, the success of any athletic programme depends upon the student's interest and participation in the variety of physical education activities available.

The LCAA executive consists of a president, a vice-president, a secretary-treasurer, and a publicity chairman. The LCAA Board includes the executive, the Intramural Athletic Council President, the Sports Store Manager, and a representative of each varsity sport. In an attempt to establish a closer union between the LCAA and the IAC, a constitutional amendment was passed recently whereby the LCAA Vice-President also holds the position of IAC President. In the past these two positions were held by separate individuals.



COLLEGE CHAPEL

Religious activities

In order to make concrete and personal the religious truths, which the students have studied in the Theology courses, Loyola College offers a programme of religious activities calculated to nourish and deepen their personal and apostolic dedication.

DAILY MASSES Two student Masses are offered daily Monday to Friday at 12:05 p.m. and 1:05 p.m. in the College Chapel. Confessors are available during the Masses. In Hingston Hall Mass is offered daily at 8:00 a.m.

SUNDAY MASS A University Community Mass is celebrated each Sunday at 11:15 a.m. in the College Chapel. Students and Faculty are invited to attend.

LOYOLA CHRISTIAN STUDENTS ASSOCIATION This organization, formerly the Sodality of Our Lady, exists for those students who have a more than passing concern for living their faith. Within the LCSA these students find opportunity to join in group discussion on those religious problems and topics which currently affect their lives.

WEEKEND RETREATS Retreats as well as Religion and Life Study Days are scheduled each year. A special retreat is offered to the Senior Students. Dates and location of the Retreats and Study Days will be announced.

CHAPLAIN — COUNSELLORS Two Chaplains are available at all times for religious and personal counselling.

John XXIII Diocesan Student Center

Sponsored by the Archdiocese of Montreal as an information Center on the various Apostolic Works and projects available to Young People. Also counselling and guidance with reference to Religious Vocations to the Priesthood. Visitors welcome to Lounge, Reading Room, and daily Mass in the house Chapel.

Address : 3500 Belmore Ave.,

Phone : 489-6285

Director : Rev. D. McCormack.

Academic Counselling

All aspects of Freshman orientation and Academic Counselling are under the direction of the Director of Freshmen. The upper classman's academic work will be directed by the Head of the Department of the Faculty in which he is registered.

To facilitate counselling and to provide the freshman students with a counsellor from the faculty, a committee of Faculty Advisers operates under the Director. Each Faculty member has a small number of students with whom he may become more closely associated than is possible in the lecture room, and whose academic work he reviews periodically with the student.

Loyola Alumni Association

The Loyola Alumni Association has as its object the advancement of the interest and the promotion of the welfare of Loyola College, of the Association and its members, and the maintainance of the fellowship developed, during academic life through social, spiritual and cultural activities.

During the course of the year, the Loyola Alumni Association sponsors the Communion Breakfast, Golf Tournament, 'Homecoming' Dinner-Dance, Oyster Party, Memorial Mass and Senior Class Reception. It also sponsors the selection and presentation of the Loyola Medal to outstanding Canadians and from time to time, Chartered International Flights as a special service to Alumni.

The Loyola Alumni Association publishes a quarterly magazine, the Loyola Alumnus, and offers the services of its office to aid individual classes in organizing and preparing Class Reunions.

A General Meeting is held every year, generally at the College. At this meeting officers for the coming year are elected and all matters of general business transacted.

The Loyola Alumni Association sponsors the Loyola Alumni Student Loan Fund, the Post-Graduate Bursaries, the Under-Graduate Bursaries and the Loyola College Endowment Fund.

The office of the Director Alumni Affairs and the Executive Secretary is located at 2499 West Broadway Avenue.

university officer training units

The regular officer training plan

Introduction

The Department of National Defence, through the Regular Officer Training Plan (ROTP), sponsors a programme of university education and leadership training for selected numbers of young men who have the potential to become officers in the Canadian Armed Forces.

Candidates with senior matriculation, junior matriculation, or who are university undergraduates taking suitable courses, are eligible to apply for enrolment as officer cadets in the Service of their choice. The admission standards are high, but for those who qualify, the way is open to a challenging and rewarding career. Students who are selected for ROTP while attending university will be enrolled in the Service of their choice while continuing their university studies.

Training in the ROTP is divided into two parts. Cadets attend a Canadian Services College or a University throughout the academic year and then go to a unit or training establishment of their Service for training each summer.

Academic training

In general terms, the courses which are needed in business and industry are also required in the Armed Forces. The following are broad patterns:

Engineering — Civil, Mechanical, Electrical
Engineering Physics, Chemical.

Arts — General, Honours.

Science — General, Honours.

Other specialist courses which may be required by the Armed Forces. (If any course exceeds four years, the student may be accepted for his final four years only).

Conditions of service

Successful applicants will be enrolled as officer cadets in the Canadian Armed Forces and remain in that rank until completion of their academic training under ROTP. Thereafter, they will normally be commissioned and promoted to either Sub-Lieutenant (Navy), Lieutenant (Army), or Flying Officer (Air Force). Cadets are obliged to maintain good standing academically and in military training. A cadet who fails a year, or who lacks adequate standing in a subject from a previous year, loses his benefits. On the recommendation of his faculty, he may be permitted to repeat one year at his own expense and, if successful, be re-instated.

Financial assistance

To cover the cost of education, the Department of National Defence will pay tuition and all essential fees. Books and instruments needed for study are provided free at the Canadian Services Colleges. Students attending university under the ROTP are granted \$125.00 each academic year for the purchase of books and instruments.

Officer Cadets of the ROTP are paid at the rate of \$180.00 per month upon enrolment, increasing to \$185.00 per month after three years continuous service.

Cadets attending a civilian university must individually arrange for their food and lodging. All Officer Cadets are assessed \$85.00 per month for rations and quarters while on summer service training.

An Officer Cadet is provided with uniforms and equipment for ROTP training. After graduation, on being commissioned as an officer, he will be entitled to an outfit allowance of \$450.00 for the purchase of uniforms and accoutrements.

Admission requirements

An applicant must have the following qualifications:

- a. CITIZENSHIP

— be a Canadian citizen or a British subject resident in Canada with the status of a landed immigrant.

- b. MARITAL STATUS

— be single and remain so until commissioned.

- c. MEDICAL

— be physically fit for enrolment in the Service of his choice.

d. **AGE**

— have reached his 16th birthday, but not his 21st birthday on the first of January of the year of entrance if applying with a senior matriculation; or his 20th birthday if applying with a junior matriculation. Consent of a parent or guardian is required if he is under 18 years of age.

How to apply

Application should be made through the Commanding Officer of the University unit on campus or through the Resident Staff Officer.

University Reserve Units

General

The University Reserve Units are organized as sub-components of the reserves of the three Services as follows :

- (a) University Naval Training Division (UNTD);
- (b) Canadian Officer Training Corps (COTC);
- (c) University Reserve Training Plan (URTP).

Role

The role of the University Reserve Units is :

- (a) To introduce the university undergraduates to service life so that they may make an intelligent appraisal of the advantages of a service career in the Canadian Forces.
- (b) To provide selected university undergraduates with the training necessary to qualify them for commissioned rank in the Regular or the Reserve forces.
- (c) To engender in university undergraduates an awareness of the needs, problems and responsibilities of the Armed Forces of Canada and an understanding of their role.

Training

The normal training programme is divided into two theoretical and two practical phases. Selected officers will be given a third theoretical and practical phase of training. Each theoretical phase consists of 64 hours of instruction at the university during the academic year. The practical phases each consist of from 12 weeks to 15 weeks of training taken at a service school or unit of the Regular force. This practical training in interesting fields will reinforce certain university courses.

During summer training the undergraduates receive Regular Force pay. Transportation, uniforms, meals and accommodation are provided as prescribed for officers of the Regular Force. The officer cadet also receives medical and dental care while on summer training. During the university year, undergraduates may earn up to 16 days' pay for training completed.

Commissioning

Upon successful completion of training, cadets are commissioned and may be considered for service in the Regular Forces or the Reserves.

fees

scholastic year — 1967-1968

Regulations regarding payment of tuition and fees

TUITION AND FEES MUST BE PAID AT THE TIME OF REGISTRATION. However, a student may, in special cases of hardship and with the consent of the Bursar, pay Tuition and Fees in two instalments. The first instalment of Tuition and Fees covering the First term must be paid in full at registration. The second term fees to be paid in full on January 15th following. In such cases an instalment fee of \$10.00 will be charged.

Evidence of Loyola Scholarship Awards or Loyola Bursaries must be submitted at time of registration. If a partial Loyola Scholarship or Bursary is awarded, the balance of Tuition and Fees must be paid at registration.

Students who have applied for Provincial or Federal Government Bursaries must still settle their fees at registration in accordance with the above.

Students will not be considered registered and may not attend classes until the required fees have been paid or arrangements for payment made with the Bursar. Failure to make payments of tuition, fees or other amounts owed the College when due, or to arrange for such payments before their delinquent dates, is sufficient cause to bar the student from classes or examinations and to withhold diploma, scholastic certificate or transcript of record until the debt has been adjusted with the Bursar's Office.

Any damage done to any property of the College will be charged to the offender's account.

Drafts, cheques, money orders, etc., should be made payable at par to "Loyola College" and addressed to the Bursar, Loyola College, 7141 Sherbrooke Street West, Montreal 28, Quebec.

All accounts are subject to revision for adjustment of errors. The College also reserves the right to make changes without notice in the published scale of fees.

general fees — tuition

● ARTS (General Course)		
All years	\$270.00 per half year	\$540.00 per year
● ARTS (with pre-Medical subjects)		
Freshman	\$270.00 per half year	\$540.00 per year
Sophomore, Junior and Senior	\$287.50 per half year	\$575.00 per year
● SCIENCE		
All years	\$287.50 per half year	\$575.00 per year
● ENGINEERING		
All years	\$297.50 per half year	\$595.00 per year
● COMMERCE		
All years	\$270.00 per half year	\$540.00 per year

* The above fees were applicable to 1966-67 academic year and are subject to change for the 1967-68 academic year without notice.

N. B. — IN CASES WHERE CHEQUES ARE RETURNED TO THE COLLEGE MARKED "NOT SUFFICIENT FUNDS" THERE WILL BE A \$3.00 CHARGE.

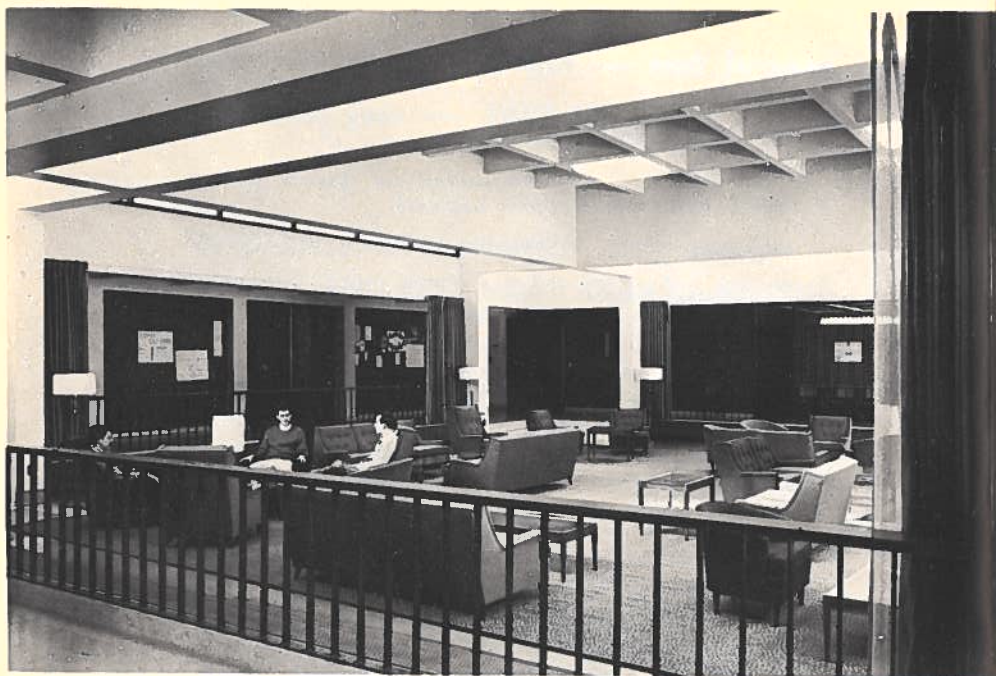
Student activity

Student Administrative Council	\$17.00
Student Centre Building Fee	10.00
Loyola College Athletic Association	13.00
Total — (payable at registration)	\$40.00

Special fees

Payable at registration

Tuition, extra subject (in addition to regular program)	\$100.00
Registration Fee (payable on first entrance only)	5.00
Late Registration Fee — for first day	10.00
Late Registration Fee — each succeeding day	3.00
Library Fee	5.00
Medical Fee	3.00
Accident Insurance-Compulsory	5.00
Graduation Fee — 4th year students	20.00



MAIN LOUNGE, HINGSTON HALL

Payable on date of each application

Engineering Elementary Survey School,	
Course Fee	60.00
Supplemental examination, each	7.00
Special examinations	15.00
* Transcripts (Full)	1.00
* Transcripts (Partial)50
Parking Permit	20.00
Local examination privileges,	
each examination	15.00
* Transcripts are released only when all outstanding balances have been paid.	

Withdrawals and adjustments

ANY STUDENT WHO IS FORCED TO WITHDRAW FROM A COURSE OR FROM THE COLLEGE IS REQUIRED TO NOTIFY THE REGISTRAR IN PERSON OR IN WRITING. WITHDRAWAL NOTICES FOR PURPOSES OF REFUND WILL BE EFFECTIVE ON DATE OF RECEIPT BY THE REGISTRAR. NO TELEPHONE WITHDRAWALS WILL BE ACCEPTED.

If, after paying the fees, a student finds it impossible to continue at College, a refund of tuition only will be made from date of withdrawal on the following basis :

Registration date to September 30

A Refund of 7/8 of full year tuition

October 1 to October 31

A Refund of 6/8 of full year tuition

November 1 to November 30

A Refund of 5/8 of full year tuition

December 1 to January 15

A Refund of 4/8 of full year tuition

January 16 to January 31

A Refund of 3/8 of full year tuition

February 1 to February 28

A Refund of 2/8 of full year tuition

March 1 to March 31

A Refund of 1/8 of full year tuition

After March 31

No Refund.

Residence**Men**

Hingston Hall, completed in 1963 and located on campus, is a modern edifice providing room and board for 306 students. This residence has two, four floor wings, centered by the main entrance and the common lounge. Student recreational facilities, study rooms, offices and chapel are located on the ground floor. Meals are served in an attractive refectory, cafeteria style. The aim of Hingston Residence is to promote spiritual, athletic, social and cultural ideals moulded into an ideal student educational atmosphere. To serve this end, academic and spiritual counsellors as well as proctors are available for student guidance.

Hingston Hall has 132 single rooms and 84 double rooms available. Room facilities include bed linen and blankets.

All Freshmen coming from outside the Montreal area will be obliged to live in Residence.

Women

Langley Hall, the newly acquired residence for women students, will be open for occupancy in the fall of 1967.

The residence, a three storey brick building, is located at 6900 Sherbrooke St. West, two blocks from the main campus. Attractive accommodations are available for approximately 125 women in the completely renovated and equipped building.

Single, double, and triple rooms are provided (no private baths). The rooms are completely furnished and the housing contract includes the rental of pillow, blankets and linen. Dining facilities do not exist in Langley Hall; all meals are served in the men's residence, Hingston Hall.

All women students under 21 years of age, who cannot live at home, are obliged to live in residence. Any exceptions to this regulation must be approved by the Dean of Women.

Parking facilities for resident students are the same as for other students on the campus. Parking permits may be obtained for a fee of \$20.00. Residence fees (exclusive of the Christmas holidays) are as follows :

Double Room	\$740.00
Double Room and Triple Room	\$740.00
(Womens Residence)	
Single Room	780.00
Damage and key fund	15.00
Residence activity fee	10.00
Room deposit which must accompany each application	50.00

The room deposit of \$50.00 will be deducted from the payment due on entrance. The money will be refunded if the student is not accepted or if the applicant cancels the room reservation by September 1, prior to registration.

RESIDENCE FEES MAY BE PAID IN TWO INSTALLMENTS. THE FIRST INSTALLMENT OF RESIDENCE FEES COVERING THE FIRST TERM MUST BE PAID IN FULL AT REGISTRATION.

THE SECOND TERM FEES MUST BE PAID IN FULL ON OR BEFORE JANUARY FIFTEENTH FOLLOWING.

Residence fees, paid in full, on or before September 1, will be subject to a discount of \$10.00.

No student will be permitted into residence before settlement of the account has been made in accordance with the above regulations.

The College reserves the right to make changes without notice in the published scale of fees, if, in the opinion of the College, circumstances so require.

Students will not be considered registered and may not attend classes until the required fees have been paid or arrangements for payment made with the Director of Residence. Failure to make payments of tuition, fees or other amounts owed the College when due, or to arrange for such payments before their delinquent dates, is sufficient cause to bar the student from classes or examinations and to withhold diploma, scholastic certificate or transcript of record until the debt has been adjusted with the Bursar's Office.

Application for men's residence should be made to the Manager of Hingston Hall, Loyola College, 7141 Sherbrooke West, Montreal 28, Quebec.

Application for women's residence should be made to the Dean of Women, Loyola College, 7141 Sherbrooke Street West, Montreal 28, Quebec. Application forms and further information may be obtained by writing to the above.

To ensure favourable consideration of your application, it is recommended that applications be submitted prior to August 15.

The College reserves the right to place the student in whatever rooms seem to be best in the interests of the men's programme as a whole, but careful consideration will be given to preferences expressed.

If a student withdraws from residence, a pro-rated refund less ten per cent will be made on room and board.

All residence fees are payable in Canadian funds, and cheques will be made payable to Loyola College. Residents are required to vacate their rooms within 24 hours of the last examination or graduation.

ADMISSIONS

Admission to first year is granted to students with Junior Matriculation.

Admission to second year is granted to students with Senior Matriculation.

Admission to second and third years is granted to transfer students.

Admission is granted on the basis of ability, achievement and promise as evidenced by :

- 1 Principal's Letter of Recommendation.
- 2 Official Academic Records.
- 3 Results of C.E.E.B. Tests : 2 S.A.T. (verbal and mathematics), 3 achievement tests, one (1) of which must be English Composition. These tests should be written not later than March of the year for which application is being made.
- 4 Recommendation by the Admissions Committee, after interview if required.

Sometimes the Committee will recommend the admission of a mature student, over 21 years of age, whose secondary education has been interrupted by causes beyond his control. Sometimes it will recommend conditional admission, with probationary requirements. Any student who fails to satisfy his probationary requirement must withdraw and will not be considered for re-admission.

(Note : All documents submitted become the property of the College if the applicant is accepted).

ADMISSION TO FIRST YEAR In Canada, Junior Matriculation standing, with college entrance attainment, indicates ability, achievement and promise sufficient for admission into first year : specifically, The Catholic High School Leaving Certificate, Department of Education, Province of Quebec (10 papers), and The High School Leaving Certificate, Department of Education, Province of Quebec (10 papers), with 50 per cent in each paper and an average of 65 per cent for general studies, but 70 per cent for Honours studies and the Engineering programme. Consult individual study programmes for subjects required. English Literature, English Composition, Elementary Algebra and Elementary Geometry are always required. English Literature, En-

glish Composition, Intermediate Algebra, Trigonometry, Chemistry and Physics are required subjects for Honours Science Studies and the Engineering Programme.

Some equivalents of the above are : in the United States, Grade XII certificate with the college recommending mark as announced by the particular High School; in Great Britain, the General Certificate of Education, if it indicates satisfactory completion of five subjects at the ordinary level (including English, another language, and Mathematics); in Latin America, a certificate showing satisfactory completion of courses necessary for admission to university in the applicant's own country.

ADMISSION TO SECOND YEAR In Canada, Senior Matriculation or its equivalent is sufficient for admission to second year General studies in Arts, Commerce and Science if it is attained with 50 per cent in each paper and an average of 60 per cent. A 70 per cent average is required for Honours studies.

The following subjects are required of all applicants to second year Arts, Commerce and Science : English Literature, English Composition, French Literature, French Composition, Religion, Algebra II and Trigonometry I.

Additional required subjects are by Faculty : Arts — two of : History, Latin (Literature and Composition), and Science or Mathematics.

Commerce — Two academic subjects.

Science — Analytic Geometry, Chemistry and Physics. Calculus is required for Honours Science studies.

Applicants for admission to the second year of Engineering should consult the Engineering Section of the Calendar.

The General Certificate of Education, if two of its five subjects are at the advanced level, and all subjects are appropriate to the programme desired, will admit an applicant to second year.

TRANSFER STUDENTS A transfer student is a student applying for admission to advanced standing with credit given for work done at another college or university.

No student who is ineligible to re-register at his previous college or university will be admitted to this college.

No transfer student may be admitted directly into fourth year.

Two full years of residence are required.

Transfer students must present to the Registrar by July 15th the following documents from the university they left:

1) an official certificate of standing (normally not less than 60 per cent average; 2) a statement of honourable dismissal; 3) permission to enter the session, faculty, and year for which application is being made at Loyola College.

Applications for admission should be addressed to the Registrar, Loyola College, 7141 Sherbrooke Street West, Montreal 28, not later than June 1.

REGISTRATION Registration takes place on the days and times assigned. These are given in the Academic Calendar at the beginning of this book. A late Registration fee is charged for registration later than the time assigned — \$10.00 for the first day and \$3.00 for each succeeding day.

Every student registers in the Department designated by the name of his Continuation Subject.

ACADEMIC REGULATIONS

Classification of students

- a) A full-time student is one who is registered in four or more full undergraduate courses.
- b) A part-time student is one who is registered in less than four full courses.
- c) A special student is one who is not proceeding to a degree or certificate.
- d) A student on probation is one who is placed on probation by the Committee on Admission or by the Committee on Academic Standing. In case of failure such students will not be permitted to repeat their year but will be required to withdraw.

RESIDENCE REQUIREMENTS AND LENGTH OF PROGRAMME OF STUDIES The number of years of attendance required for the attainment of any degree or certificate is as indicated in each programme. This time may be reduced at the discretion of the Committee on Admissions through the transfer of credit from another university. In all cases, attendance at classes for at least two academic years shall be required.

A candidate may be excused attendance for not more than one full academic year or the equivalent through the transfer of credit obtained by attendance at or by correspondence courses from another approved university. A student may take courses for credit in summer school conducted by this or other institutions, subject to the prior approval of the Head of the Department which gives the course and the Head of the Department in which he is registered. Such courses, if approved, may be counted towards degrees. Normally, students who enter with Junior Matriculation standing, will require four complete academic years to obtain a Bachelor's degree.

Course Load

The normal course load for each year is indicated in the programme for each degree.

Normally a student will be allowed to take only one course in excess of the normal load. The Committee on Academic Standing may, in exceptional cases,

allow a student to take two courses in excess, but only if the student has obtained better than average standing in the previous academic session. The year's average will be determined from all courses for which he is registered.

Under certain conditions, a student may be allowed to transfer from one course to another in any year. He must obtain the approval of his Major department. The appropriate instructors should be informed, and a special form should be filled out and given to the Registrar. The last day on which a transfer may be effected is shown in the Academic Calendar.

Classification of courses and grades

a) Courses are referred to as: Half-Courses, in which the subject matter is normally completed in one semester; and Year Courses or Full Courses, in which the subject matter is normally completed in one year.

b) The grading is as follows:

- 80 - 100 Grade "A" or First Class Honours.
- 65 - 79 Grade "B" or Second Class Honours.
- 60 - 64 Grade "C" or Third Class Honours.
- 50 - 59 Grade "D"
- 35 - 49 Grade "Fx" — Failure, with supplementary examination privileges in certain cases.
- 0 - 34 Grade "F" — Failure, with no supplementary examination privileges.

c) The Bachelor's Degree is granted according to these traditional categories:

- Cum laude to students with a four year average of between 70% and 79%.
- Magna cum laude to students with a four year average of between 80% and 89%.
- Summa cum laude to students with a four year average of 90% or over.

Attendance regulations

A student is expected to attend all lectures, discussion groups, seminars and laboratory periods of any courses in which he is registered.

A student who has been absent from more than 20% of the lecture and/or laboratory periods in a course which he has failed will not be allowed to write a supplemental examination in that course. The course must be repeated, or, if an elective, an equivalent course taken.

Examinations

a) Regular examinations:

Final examinations in first semester courses are written at the beginning of January; final examinations in all other courses are written in April and May.

b) Mid-Year Tests:

Tests are conducted in Freshman courses, on assigned dates before the Christmas vacation. One-hour tests in regular class periods may be held by any Instructor whenever he thinks advisable.

c) Supplemental examinations:

A supplemental examination is one set in a subject in which a student (who has not failed his year) has failed to obtain standing at the regular examination, but who has obtained a minimum of 35%.

All supplementals in Year Courses and in second semester courses are held in late August. Supplementals for first semester courses however, for Seniors, are held in May. Applications to write August supplemental examinations must be sent to the Registrar before July 15.

If a student has written and failed the first regular examination in a subject and is eligible to write a supplemental, he must do so the first time this supplemental is scheduled. If he fails to write it at this time, or if he writes and again fails it, he must repeat the course, or an equivalent, if an elective, before re-examination is allowed.

If a student is unable to write the supplemental examination here, he may be granted local privileges upon the payment of the required fee. The student must secure, as presiding official, a qualified member of an educational institution. The student must pay that institution the fee it charges for its services.

For those requesting local privileges, the name, address and consent of the presiding official must be in the Registrar's Office by July 15; otherwise the student must write at this College.

d) Special examination and aegrotat standing :

A special examination is an examination other than the regular or supplemental examination, permitted by the Committee on Academic Standing for a grave reason and after special application. No special examination or aegrotat standing will be allowed except on the recommendation of the Chairman of the Department concerned, after consultation with the instructor involved.

A student who, because of illness, has failed to write the final examinations in January, or the final examinations in April and May, in any courses, may apply for aegrotat standing or for permission to write a special examination, provided he presents a medical certificate to the Registrar.

Reasons other than medical must also be fully documented for consideration by the Committee on Academic Standing.

These documents must be submitted in writing to the Registrar not later than one week after the date in which the examination was held.

Special examinations normally will be written at the time of the supplemental examinations.

e) Examination Regulations :

A candidate may not be permitted to the examination hall later than thirty minutes after the beginning of an examination, and he may not leave within thirty minutes after the distribution of examination papers. No articles such as textbooks, notes, books of tables, data sheets, paper, written material, etc., may be taken into the examination hall unless authorized by special instructions. No papers may be taken from the examination hall.

A candidate may not communicate with another candidate; he may not copy from another nor allow another to copy from him.

A violation of these rules may lead to the cancellation of the candidate's examination paper and even to his expulsion from the College.

Determination of standing

Term work

In all subjects, the ratio of term-work to examination mark is determined by the Department concerned. In general, the final examination will not count for less than 50%.

An instructor, with the approval of the Dean and the Chairman of the Department concerned, may require that essays, term papers, etc., be completed satisfactorily and in due time before a student will be granted permission to write the final examination. If the conditions are not fulfilled, the student will be debarred from writing the final examination.

Requirements for promotion

- a) A student is eligible for promotion if :
 - i) he has obtained the required pass average; and if
 - ii) he has not failed in more than two full courses.
- b) If a student has failed to obtain the required pass average he may be permitted to repeat.
- c) If a student has obtained the pass average but has failed in more than two courses, he may be permitted to repeat.
- d) A student who has repeated a year, may be promoted to the following year only if he has passed all courses.
- e) If a student has failed a year according to the judgment of the Committee on Academic Standing, he may not take courses in the Evening Division (Summer Session) to qualify for promotion or to become eligible to write supplementals.
- f) A student who has failed a course, or courses (with a minimum of 35%) but who is not obliged to repeat the year's work must write supplemental examinations.
- g) Normally a student will be allowed to carry only one condition (a full course failed) into the following year. The Committee on Academic Standing may make exceptions.
- h) A student must obtain complete standing in his First Year before he may register for the Third Year; and in his Second Year, before he may register for the Fourth Year.
- i) Normally a student must have completed standing in Third Year before he may register for Fourth Year. The Committee on Academic Standing may make exceptions.

Transfer students

The promotion of students who transfer to another Faculty or programme of studies will be decided upon by the Dean and the Chairman of the Department to which he is transferring.

Failures, repetition and withdrawals

Failures

A student fails his year if he has not obtained a passing average; or if, with a passing average, he has failed more than two full courses.

Subjects which depend directly upon the work of a preceding year may not be taken by a student who has failed in the work of the preceding year. A student who fails to pass a supplemental examination will not be eligible for re-examination without a further year's attendance in the course in which he has failed.

Repetition

A repeating student is one who has failed the previous year here or at any other recognized university, regardless of whether he is registered in the same or a different faculty.

Students may be permitted to repeat a year, subject to the approval of the Committee on Academic Standing. Students seeking this permission must apply in writing to the Registrar's Office before July 15.

A student may repeat a course only once, except with permission of the Committee on Academic Standing. However, he may be granted credit on a course in which he has obtained 65% or more. He may not take courses which are scheduled in advance of the year he is repeating.

Repeating students in the First Year who do unsatisfactory work on the Christmas examinations shall be required to withdraw, subject to an appeal to the Committee on Academic Standing, which appeal should be submitted in writing and sent to the Office of the Dean of Studies within one week after the publication of the results. Unsatisfactory work is defined as having an average below 50%.

Withdrawals

a) A student who is repeating a year and fails to obtain a pass average in the final examination must withdraw.

b) A student who is repeating First Year and fails to obtain 50% in the Christmas tests must withdraw.

c) A student who is on probation and fails to obtain a pass average in the final examinations must withdraw.

d) A full-time student who fails his year and who has already failed twice (either here or elsewhere) must withdraw.

e) A student who in his First Year fails to reach a minimum standard in the Christmas tests must withdraw. The minimum standard is defined as an average of 30%.

Rereading

While all papers in failed subjects are reread before the grades are submitted to the Registrar's Office, and care is taken to record marks accurately, a student who considers that some factor affecting the final mark on the examination was not considered by the examiner, may appeal to have the paper reviewed. This request should be submitted in writing to the Registrar within two weeks of the official publication of student grades, together with a fee of \$10.00.

Reports

Reports of final examination results of all students are sent to their homes. A mid-year report is also sent to the homes of First Year students.

Degrees

Graduating student must make application for their degree or diploma before February 2, 1968. Application forms may be obtained at the Record's Office.

scholarships, bursaries and awards

Scholarships

A scholarship is an award granted annually to a student for academic excellence, which may be renewed if the student maintains an above average (70% overall average) academic standing.

The students will not receive cash unless otherwise stated, but their tuition fees will be fully or partly paid by the scholarships and only the remainder by the students themselves, depending on the value of the scholarships awarded.

The value of Endowed Scholarships may fluctuate depending on the current interest rates. Apart from Entrance Scholarships, candidates for scholarships must have completed at least one year at Loyola College, these students will not have to apply for scholarships, they will be awarded according to their marks and openings available.

No student will be considered eligible for a scholarship who has failed any year in his college or university education. Consideration will, however, be given to the student who has obtained more than a 70% average in each of the two years following the year repeated, e.g., a student who fails in Freshman may be eligible only in his Senior year; a student who fails in Sophomore, Junior, or Senior will not be eligible.

No student with supplemental examinations will be eligible for a scholarship, or if he already holds a scholarship, for its renewal.

For renewal of a scholarship, the student holding the scholarship must obtain an overall average of 70% or more for the current academic year, and must have passed all his final examinations in the courses in which he is registered.

If a student holding a scholarship decides to change faculty he will retain the scholarship only on condition that he receives the approval of the Scholarship Committee.

No student may hold more than one scholarship from the College at any one time.

A. endowed scholarships

THE LILLY F. BARRY SCHOLARSHIP.

2. Value : \$510 each.

1. Value : \$490.

THE URSULA CARLING SCHOLARSHIPS. These are an endowment from the estate of the late Mrs. Ursula Carling.

2. Value : \$250 each.

THE CLORAN MEMORIAL SCHOLARSHIP.

Value \$80.

THE COLLINS-HEFFERNAN SCHOLARSHIP.

Funds from the Mary Ellen Heffernan Bursary and from the Nelson Collins Scholarship.

Value : \$200.

Conditions : Open to students entering Fourth Arts.

THE CUDDY-STANFORD MEMORIAL SCHOLARSHIP. Funds from the John M. Cuddy Scholarship and from the Stanford Memorial Scholarship.

Value : \$200.

Conditions : Open to students entering Third Commerce.

THE DOWLING-MORIARTY SCHOLARSHIP.

Funds from the estate of the late Francis J. Dowling, and of the late Mrs. E. Stowell, widow of John Moriarty.

Value : \$200.

THE MRS. F. J. DUCKETT SCHOLARSHIP. From the estate of the late Mrs. F. J. Duckett.

Value : \$200.

THE FRIENDS OF LOYOLA SCHOLARSHIP. From the funds endowed for the James Corcoran Scholarship, the Rev. William Doherty Scholarship, the Dollard Scholarship, and the Gregory O'Bryan Scholarship, and from funds given by the Student's Penny Scholarship. Value \$200.

THE ARTHUR HALLEY MEMORIAL SCHOLARSHIP. Endowment from P. F. Halley of St. John's Newfoundland in memory of his son, Arthur, a graduate of the Pre-Medical class of 1946, magna cum laude, who died on the eve of Convocation.

Value : \$100.

Conditions : Open to students entering Fourth Arts (Bio-Chem.) or Fourth Science (Bio-Chem.).

THE MR. AND MRS. THOMAS WILLIAM KAVANAUGH MEMORIAL SCHOLARSHIP. Donated by the Rev. Thomas W. Kavanaugh.

Value : \$120.

THE LOYOLA SODALITY SCHOLARSHIP. Funds from the Sodality Scholarship and from the Loyola Scholarship Club Association Bursary.

Value : \$200.

THE MAHONEY-MURPHY MEMORIAL SCHOLARSHIP. Originally established as the Mother Ellen Memorial Scholarship, and as the John Walsh Murphy Memorial Scholarship.

Value : \$200.

THE KENNETH J. McARDLE MEMORIAL SCHOLARSHIP. Donated by Mrs. Mary McArdle as a tribute to the memory of her late husband Kenneth J. McArdle.

Value : \$125.

Conditions : Open to students entering Second Science (Honours Mathematics or Major Mathematics).

THE ST. IGNATIUS PARISH SCHOLARSHIP. Money collected and presented to the St. Ignatius Men's Association and originally known as the Coronation Arts Courses Scholarship.

Value : \$100.

THE SHARP-O'REILLY SCHOLARSHIP. Funds from the Alice M. Sharp Scholarship and from the Winnifred O'Reilly Memorial Bursary.

Value : \$200.

B. Gifts by the College

LOYOLA COLLEGE SCHOLARSHIPS. Entrance Scholarships are awarded by the Scholarship Committee to students entering Loyola College from Grades XI and XII. These Scholarships cover full tuition fees, and are automatically renewable from year to year until the student obtains his degree as long as the student performs satisfactorily. A Student's performance is judged satisfactory if a student passes every course without supplemental examinations, and obtains an overall average of at least 70% in each year at Loyola College.

These Scholarships will be awarded on the basis of the principal's recommendation and the candidate's High School record. Applications must be forwarded to Loyola College, Director, Financial Aid, PRIOR TO APRIL 15.

SUSAN LANGLEY SCHOLARSHIPS. Endowed scholarship established by Mr. and Mrs. M. J. McCormick in memory of the late Susan Langley; offered to Freshmen with high Academic standing in their four years of High School, but who do not qualify for Loyola Entrance Scholarships. Non-renewable.

SECOND YEAR

ARTS, Number : 13, Value : Full Tuition.

COMMERCE, Number : 1, Value : Full Tuition.

SCIENCE, Number : 11, Value : Full Tuition.

ENGINEERING, Number : 6, Value : Full Tuition.

THIRD YEAR

ARTS, Number : 14, Value : Full Tuition.

COMMERCE, Number : 1, Value : Full Tuition.

SCIENCE, Number : 14, Value : Full Tuition.

ENGINEERING, Number : 3, Value : Full Tuition.

FOURTH YEAR

ARTS, Number : 11, Value : Full Tuition.

COMMERCE, Number : 3, Value : Full Tuition.

SCIENCE, Number : 10, Value : Full Tuition.

THE BARTLETT MEMORIAL SCHOLARSHIP. Value : \$80.

THE BARTLETT-DOHERTY MEMORIAL SCHOLARSHIP. Value : \$80. Open to students entering Third Science.

THE GASSON MEMORIAL SCHOLARSHIP. Value : \$200. Open to students entering Third Commerce.

THE JONES MEMORIAL SCHOLARSHIP. Value : \$200.

THE MCCARTHY MEMORIAL SCHOLARSHIP. Value : \$200.

THE McMAHON MEMORIAL SCHOLARSHIP. Value : \$160.

THE O'BRYAN MEMORIAL SCHOLARSHIP. Value : \$200.

THE O'DOWD MEMORIAL SCHOLARSHIP. Value : \$200.

THE PRESIDENT'S SCHOLARSHIPS. Number 3. Value : One, \$160; two, \$150 each.

THE J. S. O'NEIL SCHOLARSHIP. Value : \$150. Donated by J. S. O'Neil.

C. Annual gift scholarships

THE CHARLES BROWN MEMORIAL SCHOLARSHIP. Value : \$50.

THE MRS. CHARLES BROWN SCHOLARSHIPS. Number : Two. Value : \$100. each. Open to students entering Third Commerce.

THE GUTELIUS MEMORIAL SCHOLARSHIP. Value : \$100. Open to students entering Fourth Commerce.

THE KNIGHTS OF COLUMBUS COUNCIL 284 SCHOLARSHIP. Value : \$150.

THE STATE COUNCIL, KNIGHTS OF COLUMBUS, PROVINCE OF QUEBEC SCHOLARSHIP. Value : \$100.

Bursaries

A Bursary is a sum of money given to a student in order to assist him financially in the continuation of his studies.

A Bursary will take the form of a credit made to the student's tuition account. Ordinarily bursaries will not be awarded to students with less than a 50% overall average.

Students desiring bursaries must make written application to : Director, Financial Aid, Loyola College, Montreal 28.

Applications for Bursaries must be made :

a) no later than September 1. Applications received after the closing date will be retained and considered only after the second closing date.

b) no later than December 20. Applications received after this second closing date will not be considered and will be returned to the applicants. Freshmen and Students coming to Loyola for the first time may apply for a second semester bursary only.

Students are permitted to make only one application in any given academic year.

Province of Quebec

The Province of Quebec has an extensive programme of Student Loans and Bursaries available to students who are domiciled and have resided in Quebec for at least a year. Foreign students with landed immigrant status, and who have proved their intention to remain in the country after obtaining their degree are eligible if they have been living here for a year or more. For application forms the student must write direct to :

Department of Education,
Student Aid Service,
Parliament Buildings,
Quebec 4, Que.

and ask for an official application form. The student then fills in the form, has it signed by his parents and has it stamped and verified at the Financial Aid Office. This is then sent to Quebec by REGISTERED MAIL. It MUST arrive there before the 30th of September.

Federal Loan Plan

Students residing outside the Province of Quebec, but studying in an Institution of Higher Learning in the Province of Quebec, may apply for a loan under this plan. Contact the bank manager in your home town for information and details.

Higher Education Assistance Corporation

Most of the States have a Higher Education Assistance Corporation, therefore Students from the United States should inquire from their Bank or at their State Capital regarding financial assistance.

THE IBM THOMAS J. WATSON MEMORIAL BURSARIES. Donated by the International Business Machines Company Limited as part of the IBM Thomas J. Watson Memorial Bursary Programme.

Number : Two. Value : \$500, each. Awarded annually to needy undergraduates in any year and faculty who are in good academic standing. Apply to the Director, Financial Aid. Closing date September 1.

THE LOYOLA ALUMNI ASSOCIATION UNDERGRADUATE BURSARIES : Number: Four. Value: \$100. Awarded annually to talented and deserving students who have completed at least one year at Loyola College. Apply to the Director of Financial Aid prior to the 20th of December.

THE LOYOLA ALUMNI ASSOCIATION POST GRADUATE BURSARIES. Number : Four. Value : \$100. Awarded annually to talented and deserving students of the current graduating class who have been accepted for post graduate work at a recognized university. Apply to the Alumni Office.

THE LOYOLA AFRICAN BURSARIES. Type "A", number : four. Value : varies (includes full tuition, registration fee, room and board). Awarded to qualified and deserving students from any country in Africa who intend to aid their homeland's development. Type "B", number : six. Value : varies (includes full tuition and registration fee). Awarded on the same conditions as Type "A".

THE LOYOLA BURSARY FOR THE BLIND. Number : one. Value : full tuition for one year; renewable. To a blind student who is qualified to follow regular courses.

THE ST. PATRICK'S SOCIETY BURSARY. Number : two. Value : \$200. Awarded annually by the St. Patrick's Society of Montreal, preferably to a Fourth Year Student, in any faculty, who is Irish or of Irish extraction. Application forms may be obtained at the office of the Director, Financial Aid. Closing date is December 20.

THE TOUCHE, ROSS, BAILEY AND SMART BURSARY. Number : one. Value : \$200. "The Bursary . . . will be awarded annually to a student who is completing his third year and will be entering his final year, majoring in Accountancy in the Faculty of Commerce, and who intends on graduation to pursue the qualification of Chartered Accountant. The award will be made on the basis of academic record, ability, personality and other suitable characteristics . . .".

THE BIRKS FAMILY FOUNDATION BURSARIES. A limited number of bursaries are available under this plan. The student's financial need and academic standing will be considered in the granting of these bursaries. Apply to the Director of Financial Aid.

SOCIETE ST. JEAN BAPTISTE : Le Prêt d'Honneur. Le Prêt d'Honneur offers a loan plan to students during 12 months of the year. Requests for applications should be made to the Director of Financial Aid.

NATIONAL COUNCIL OF JEWISH WOMEN OF CANADA MONTREAL SECTION, BURSARIES. A limited number of bursaries are awarded by the Council upon the recommendation of the Financial Aid Director. Academic standing and Financial need are considered in making the award. Although there is no legal obligation, the Council hopes that the holders will, if possible, return the money at some future time, so that other students may be helped by the College. Apply to the Director of Financial Aid.

THE LOYOLA ALUMNI STUDENT LOAN FUND. The Loan Fund exists to aid students who are in financial difficulties. Because of limited resources, the trustees of the Fund normally will consider loans to students who : 1) have been successful in their last set of final examinations at Loyola; 2) are receiving a bursary from the Province of Quebec; and 3) are prepared to repay the loan by the end of the summer.

Applications should be made in writing to : Loyola Alumni Student Loan Fund, Loyola College, 7141 Sherbrooke Street West, Montreal 28, before DECEMBER 1.

B'NAI B'RITH HILLEL FOUNDATION. A limited number of bursaries are available. Amount of each bursary granted from this fund may vary according to the need of any deserving student in any year or faculty, without regard to race, religion or nationality. Apply to Director, Financial Aid.

MR. AND MRS. MEIER SEGALS BURSARIES : A number of bursaries are available, through their generosity, to needy students with good academic standing. Apply, Director, Financial Aid.

THE LOAN FUND OF THE LOYOLA STUDENT ASSOCIATION. This fund was established with a view to aiding students who are in dire financial need. Further details may be obtained at the temporary Student Center Building.

Commonwealth Scholarships

Under a Plan drawn up at a conference held in Oxford in 1959, each participating country of the Commonwealth offers a number of scholarships to students of other Commonwealth countries. These scholarships are mainly for graduate study and are tenable in the country making the offer. Awards are normally for two years and cover travelling, tuition fees, other university fees, and a living allowance. For details of the awards offered by the various countries consult the Registrar's office or write to The Canadian Universities Foundation, 77 Metcalfe Street, Ottawa, Ontario.

CHILDREN OF WAR DEAD (EDUCATION ASSISTANCE) ACT. This Act provides assistance towards an education beyond secondary school level for sons and daughters of veterans whose deaths resulted from military service during World War I, World War II, or the Korean War. If the application is approved, the Department of Veterans Affairs will pay : a) to each student an allowance of \$25 per month for the period during which he or she is attending a full-time course, up to a maximum of 36 months; b) to the University, tuition fees and other costs as described in the Act, up to a maximum of \$500 per academic year. Apply to the Department of Veterans Affairs.

Awards

GOVERNOR-GENERAL'S MEDAL. Presented by His Excellency the Governor General of Canada to the student with the highest overall average in the four years of Arts.

THE MINISTER OF EDUCATION'S SILVER MEDAL. Presented by the Department of Education, Government of Quebec, to the student with the highest overall average in the four years of Science.

THE MINISTER OF EDUCATION'S SILVER MEDAL. Presented by the Department of Education, Government of Quebec, to the student with the highest overall average in the four years of Commerce.

THE LOYOLA C.O.T.C. MEDAL. Presented by the Loyola College C.O.T.C. to the most representative Loyola student among the graduates.

THE PHILOSOPHY GOLD MEDAL AWARD. Presented by Loyola College to the outstanding student in Philosophy among the graduates, and awarded upon the recommendations of the Philosophy professors.

THE HAMILTON WATCH AWARD. Presented by the Hamilton Watch Company to the student who has most successfully combined proficiency in Accounting with achievement, either academic, extra-curricular, or a combination of both in the social sciences or humanities.

THE HAMILTON WATCH AWARD. Presented by the Hamilton Watch Company to the student who has most successfully combined proficiency in Mathematics with achievement, either academic, extra-curricular, or a combination of both, in the social sciences or humanities.

THE SOCIETY OF CHEMICAL INDUSTRY, CANADIAN SECTION, MERIT AWARD. Presented by the Society of Chemical Industry to the Highest ranking (minimum 75%) student in the fourth year, majoring in Chemistry, Chemistry-Physics, or Chemistry-Mathematics, and who has completed the course in the normal number of years.

Prizes

THE WILLIAM H. ATHERTON PRIZE. Donated by the late Dr. William H. Atherton, and to be awarded to the student outstanding for research in Canadian History.

THE ISAIAH S. BENJAMIN PRIZE FOR MATHEMATICS. Donated by Dr. Isaiah S. Benjamin of Montreal to the Third Year student with the highest three year average in Mathematics subjects.

THE CAE PRIZE FOR ENGINEERING. Donated by CAE Industries Ltd. to a graduating student with the highest four year average in the Engineering subjects.

THE CHEMCELL LIMITED PRIZE FOR CHEMISTRY. Donated by Chemcell Limited and awarded to the graduating student with the highest four year average in Chemistry subjects.

THE CHEMCELL LIMITED PRIZE FOR ENGLISH. Donated by Chemcell Limited and awarded to the graduating student in the Arts programme, taking a Major or an Honours in English, with the highest four year average in English subjects.

THE ECONOMICS PRIZE. Granted by the College to the graduating student in Arts or Commerce, taking a Major or an Honours in Economics, with the Highest four year average in Economics subjects.

THE FRENCH LANGUAGE PRIZES. Donated by the Government of France.

THE GERMAN LANGUAGE PRIZE. Donated by the Consulate General of the Federal Republic of Germany to the student who has shown the greatest progress in the German Language course offered at Loyola College.

MONTREAL ECONOMIC ASSOCIATION PRIZE. Donated by the Montreal Economic Association to the third year student taking an Honour or Major in Economics with highest three year average in his economics courses.

THE KNIGHTS OF COLUMBUS PRIZE FOR CANADIAN HISTORY. Donated by the Knights of Columbus of the Province of Quebec and awarded to the student who has obtained the highest mark in Canadian History during the current academic year.

THE R. E. O'CONNOR PRIZE FOR MATHEMATICS. Donated by Dr. Isaiah S. Benjamin of Montreal to the student graduating in Science or Engineering with the highest four-year average in Mathematics subjects.

THE PHYSICS PRIZE. Granted by the College to the graduating student in Physics with the highest four year average in Physics subjects.

THE DR. JACQUES SMITH MEMORIAL PRIZE. Donated by Dr. Kurt Ekler in memory of Dr. Jacques Smith, chief of surgery at the Hotel Dieu Hospital, St. Jerome, and a graduate of Loyola, who died suddenly in 1960 at the age of thirty six. Awarded to the graduating student with the highest four-year aggregate standing in the Biology-Chemistry course. (Science or Arts).

THE MRS. ALFRED THIBAudeau PRIZE FOR POLITICAL SCIENCE. Donated by Miss Madeleine Thibaudeau in memory of her mother, Madame Alfred Thibaudeau, and to be awarded to the graduating student with the second highest average in the field of Political Science.

THE MRS. RENEE VAUTELET PRIZE FOR POLITICAL SCIENCE. Donated by Mrs. Renée Vautelet and to be awarded to the graduating student with the highest average in the field of Political Science.

THE CHEMICAL INSTITUTE OF CANADA PRIZE. Donated by The Chemical Institute of Canada to the third year student taking an Honour in Chemistry with the highest average in his year.

THE PIERRE DESMARAIS PRIZE. Donated by Pierre DesMarais to the Student who has distinguished himself, during his last year, for his contribution to non-academic activities.

courses

Faculty of arts

Students admitted to Arts follow General and Honours programmes of twenty-two courses for four years.

A General Arts student will choose a field of concentration ("major") from: Classics, Communication Arts, Economics, English, French, German, History, Modern Languages, Philosophy, Political Science, Psychology, Sociology, Spanish, Theology. The field of concentration is normally chosen at the end of first year.

An Honours student, one who welcomes the opportunity for deeper and more intensive study, with an eye, perhaps, to post-graduate studies, will choose (subject to departmental approval) from: Economics, English, French Studies, History, Philosophy, Political Science, Theology. He must have better than 70% matriculation average, and 65% yearly average (with not less than 65% in any course) to maintain honours' standing.

A chosen field of concentration or an honours programme may dictate the electives to be taken in first year. Students should consult with the department of their choice during the period of academic counselling preceding registration.

Faculty of commerce

The inauguration of the Faculty of Commerce at Loyola in 1948 marked a significant modernization of the traditional philosophy of education. Areas of concentration in Business and Accounting were set up to meet the demands for orientation in the field of Commerce. Loyola has, at present, an Honours course in Economics and Majors in Accountancy, Business Administration and Economics. The Honours programme is designed for students who want a deeper and more extensive knowledge in their field of concentration. All graduates of the Faculty of Commerce can qualify for post-graduate or professional studies. The Faculty has retained all the necessary disciplines essential to a broad education. This would include courses in English and Philosophy. The general requirements for admission and the standards are similar to those in the other faculties (see page 66). At the end of the first year the student decides the area in which he will concentrate. Students who choose to follow a Major

must maintain a yearly average of 60%; those in the Honours programme must maintain a yearly average of 65%, and not less than 65% in any course in their field of concentration. All candidates must have a minimum of twenty-two recognized academic credits to receive the degree. All inquiries should be made in writing to the Dean of Commerce.

Faculty of Science

Beginning with the current academic year, the Science Faculty will introduce several significant programme changes.

The freshman year, traditionally common to all departments, will be so maintained as far as possible. However, at the beginning of the second semester, each student will be asked to choose one of three electives (half courses): Biology 101, Geotechnical Science 202, Mathematics 121.

At the beginning of the sophomore year, the student must definitely commit himself to a particular departmental programme, choosing one of biology, chemistry, geotechnical science, mathematics, physics, psychology. Within each department programmes at several levels will be offered, as follows:

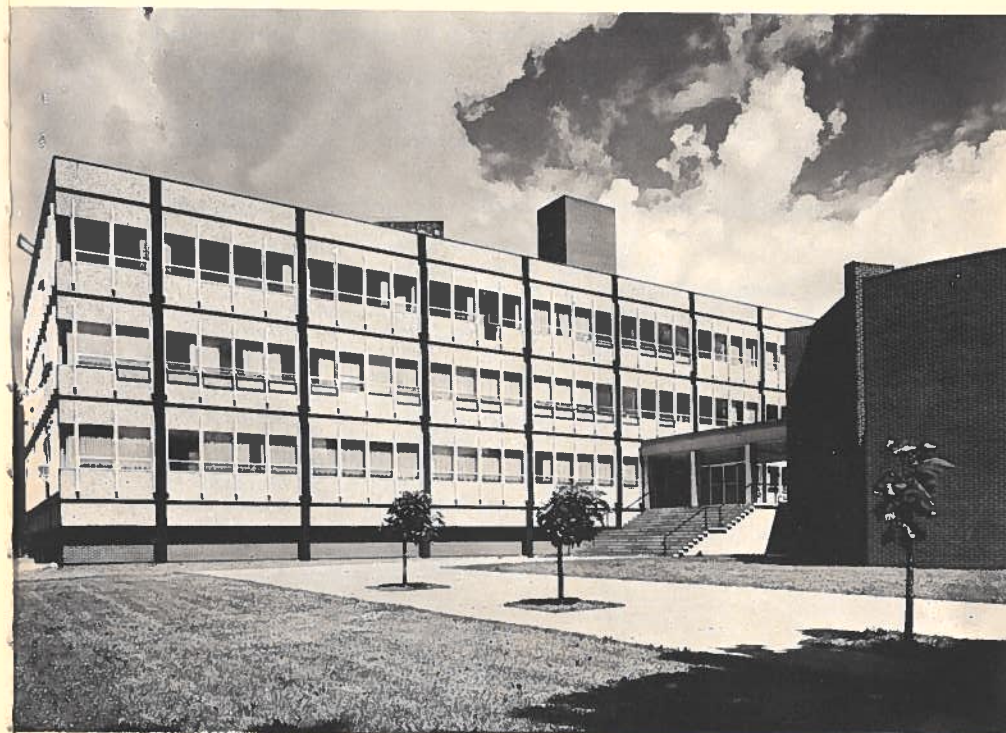
1. A newly introduced B.Sc. programme, designated a general course with concentration, and designed for students who do not plan to continue their scientific training beyond the Bachelor level. Offered by biology, chemistry, geotechnical science, mathematics and physics.
2. A major programme, leading to a B.Sc. with greater concentration in the chosen field. Designed for students capable and willing to concentrate in a designated area, students who may develop latent talents and may, perhaps with the help of a qualifying year after graduation, continue to higher degrees. Offered in biology, chemistry, geotechnical science, mathematics, physics and psychology.

NOTE that the Biology-chemistry programme given in previous years is being phased out beginning this year; students wishing to enter medical school after graduation will register as Biology majors.

3. An honours programme in chemistry, mathematics, physics. Those completing this exacting programme usually proceed to graduate school and advanced degrees. Applicants must have completed their freshman year at Loyola with approximately 70% average and no failures (or comparable standing in Grade 12).

Honour students must maintain a yearly average that does not drop below 65% and obtain not less than 65% in each course of their field of concentration.

It should be noted (a) that the student load in the above programmes varies in quantity rather than quality, (b) the programmes have been arranged with increasing work loads to permit students to obtain good marks in the courses in which they are registered; failure to maintain a satisfactory standard will result in the student being asked to drop to a less concentrated programme, (c) each department is responsible for deciding the category which a student may enter and in which he may continue; no student may claim a right to proceed in a programme against the judgment of the department concerned.



DRUMMOND SCIENCE BUILDING AND PART OF DRUMMOND SCIENCE AUDITORIUM

Faculty of Engineering

The overall objectives of the Faculty of Engineering are the growth and development of the student into a self-identifiable person and the acquisition by him of the knowledge upon which to build his career. In the concrete, these goals are proposed to the student as a personal search for excellence and the forming of himself to manage industry, whether technically or administratively.

While the subjects of the curriculum — technology, science, humanities, professional practice — have to be presented as discrete disciplines, yet the Faculty seeks at all times to make the student aware that he must integrate them into his personality so that they become the foundation for supporting his chief function in society — the making of decisions.

Conditions for entry into Engineering are given on p. 116.

programme index

Programmes leading to a Bachelor of Arts degree

105 Major in Classics
 107 Major in Communication Arts
 112 Major in Economics
 123 Major in English
 130 Major in French
 155 Major in German
 142 Major in History
 156 Major in Modern Languages
 157 Major in Philosophy
 167 Major in Political Science
 171 Major in Psychology
 172 Major in Sociology
 153 Major in Spanish
 174 Major in Theology
 112 Honours in Economics
 123 Honours in English
 131 Honours in French
 142 Honours in History
 157 Honours in Philosophy
 167 Honours in Political Science
 174 Honours in Theology

Programmes leading to a Bachelor of Commerce degree

92 Major in Accountancy
 97 Major in Business Administration
 112 Major in Economics
 112 Honours in Economics

Programmes leading to a Bachelor of Science degree

94 General — Concentration in Biology
 100 General — Concentration in Chemistry
 137 General — Concentration in Geotechnical Science
 146 General — Concentration in Mathematics
 161 General — Concentration in Physics
 94 Major in Biology
 94 Major in Biology-Chemistry *
 94 Major in Chemistry
 138 Major in Geotechnical Science
 146 Major in Mathematics
 162 Major in Physics
 170 Major in Psychology
 99 Honours in Chemistry
 146 Honours in Mathematics
 161 Honours in Physics
 * 2nd year and following only; being phased out.

Programmes in Engineering

117 Chemical
 118 Civil
 118 Electrical
 119 Mechanical

accountancy



R.L. McGraw, Assistant Professor (Chairman)
 L. M. Bessner, Associate Professor
 J. R. Hanrahan, Assistant Professor
 D. F. MacDonald, Assistant Professor
 H. B. Ripstein, Assistant Professor
 E. C. Whitehall, Sessional Lecturer

Courses leading to a B.Comm. with a Major in Accountancy

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
ACCOUNTING 101	ACCOUNTING 202	ACCOUNTING 303	ACCOUNTING 403
Economics 100	Business 201	ACCOUNTING 306	ACCOUNTING 404
English 101	Business 204	Philosophy	ACCOUNTING 406
French	French	Theology	English
Mathematics 101	Maths. 202-203	One Elective *	Two Electives *
Theology	Philosophy		

* Electives may be taken from Business, Economics, Mathematics, Political Science, Psychology, Sociology.

Students holding the Bachelor of Commerce degree with a Major in Accountancy from Loyola College are usually exempted on recommendation, from the intermediate examinations of the Institute of Chartered Accountants of Quebec. They are also usually exempted from three of the five years of apprenticeship required for the C.A. certificate.

All other graduates of the College who wish to enter the Accounting Profession but who have not followed the curriculum (as described above) for an Accountancy Major, may do so by successfully completing a prescribed course of training which normally consists of three years of evening courses in Accountancy, with at least two years of service in an approved office. For additional information, please consult the Chairman of the Department of Accountancy.

101 Introductory Accounting. Full Course. Staff

Required for all first year Commerce students. An introductory study of accounting principles and practice as related to proprietorships, partnerships and limited companies.

Text: Finney, H.A., and Miller, H.E., Principles of Accounting: Introductory, Sixth Edition (Canadian Edition prepared by C.L. Mitchell), Prentice Hall, Inc.

202 Intermediate Accounting. Full Course. Staff

Prerequisite: Accounting 101. Required for all second year Commerce students. A study of the purposes, theory and practical development of financial accounting information. Emphasis is placed on reporting to shareholders and investors, and the significance of the organizational and corporate structure. Financial statement and funds flow analyses are included.

Text: Finney, H.A., and Miller, H.E., Principles of Accounting: Intermediate, Sixth Edition, (Canadian Edition, prepared by K.F. Byrd), Prentice-Hall, Inc.

303 Auditing and Investigation. Full Course. E. C. Whitehall

Introduction to auditing; classification and scope of audits; internal control; legal and moral responsibilities of auditors; auditing standards and the role of the auditor in the business community; advanced auditing and investigations.

Texts: Stettler: Auditing Principles, Prentice Hall; Companies Act, Queen's Printer; Quebec Companies Act, Queen's Printer; Bulletins of the Canadian Institute of Chartered Accountants.

305 Managerial Accounting. Full Course. H. B. Ripstein

Prerequisite: Accounting 202. The uses of accounting information in the management process. Includes: a review of financial accounting concepts; current problems; cost accounting; decision-making and taxation problems affecting management.

Text: to be announced.

306 Advanced Financial Accounting. Full Course

R. L. McGraw and D. F. MacDonald

Prerequisite: Accounting 202. For accountancy majors. Sequential to Accounting 202. Emphasizes specialized areas, with a related examination of the theoretical structure of accounting and current problems.

Text: Finney, H.A., and Miller, H.E., Principles of Accounting: Advanced, Fifth Edition, Prentice-Hall, Inc.

310 Introductory Accounting Analysis, Finance and Taxation. Full Course. L. M. Bessner

An optional course available to students in the Faculties of Arts, Science and Engineering who have not previously studied accounting at the university level. An introduction to the accounting method and to the analysis of financial statements and funds flow, with a related examination of the areas of costing, business finance and taxation.

Text: to be announced.

403 Cost Accounting. Half Course. (First Term)

H. B. Ripstein

Prerequisite: Accounting 202. For accountancy majors. The development and interpretation of cost accounting information as a tool of business management.

Text: to be announced.

404 Taxation: Half Course. (Second Term) H. B. Ripstein

Prerequisite: Accounting 101. For accountancy majors, and also available to other students with departmental approval. The Canadian taxation structure as related to theoretical and practical problems of income and estate taxes; executorship accounting and an introduction to estate planning are included; other areas of taxation are surveyed.

Text: to be announced.

406 Advanced Accounting. Full Course. (1967-1968 only)

E. C. Whitehall

Prerequisite: Accounting 306. For accountancy majors. Sequential to previous course. Emphasizes specialized areas and accounting literature and current thought.

Text: to be announced.

406 Administrative and Specialized Accounting. Full Course. (Commencing in 1968-1969)

Prerequisite: Accounting 306. For accountancy majors.

A continuation of the specialized areas previously studied with emphasis on accounting literature and modern thought. In the second term, some time is devoted to administrative accounting applications.

Text: to be announced.



biology

Rev. S. Drummond, S.J., Professor (Chairman)

Rev. R. T. Cronin, S.J., Assistant Professor

K. S. Dhindsa, Assistant Professor

Courses leading to a B.A. with a Major in Biology-Chemistry. (a)

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Discontinued	BIOLOGY 202 CHEMISTRY 101 CHEMISTRY 102 Classics 112 or 202 or 212 or 221 French Philosophy Theology	BIOLOGY 304 BIOLOGY 305 CHEMISTRY 212 Mathematics 202 Physics 101 One Elective	BIOLOGY 406 BIOLOGY 408 CHEMISTRY 221 CHEMISTRY 222 English 289 Mathematics 202 Philosophy

Courses leading to a B.Sc. with a Major in Biology-Chemistry. (a)

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Discontinued	BIOLOGY 202 CHEMISTRY 212 CHEMISTRY 221 CHEMISTRY 222 Philosophy Theology	BIOLOGY 304 BIOLOGY 305 CHEMISTRY 323 CHEMISTRY 324 Mathematics 202 Philosophy	BIOLOGY 406 BIOLOGY 408 English 289 Philosophy or Theology Psychology Social Science

Courses leading to a B.Sc. with a Major in Biology. (b)

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101 Chemistry 102 French Mathematics 120 Mathematics 131 Physics 101 Theology	BIOLOGY 211 BIOLOGY 221 Chemistry 221 Chemistry 222 Mathematics 202 Philosophy Theology	BIOLOGY 301 BIOLOGY 302 BIOLOGY 303 BIOLOGY 311 BIOLOGY 321 Philosophy	BIOLOGY 401 BIOLOGY 402 BIOLOGY 403 or 404 or 405 or 414 English 289 Philosophy or Theology
* One Elective (in second term) from Biology 101 Geot. Sc. 202 Mathematics 121			

Courses leading to a B.Sc. in Biology. (b)

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101 Chemistry 102 French Mathematics 120 Mathematics 131 Physics 101 Theology	BIOLOGY 211 or 221 Chemistry 221 Chemistry 222 Mathematics 202 Philosophy Theology	BIOLOGY 301 BIOLOGY 302 BIOLOGY 303 BIOLOGY 311 or 321 Philosophy	BIOLOGY 401 BIOLOGY 402 English 289 Philosophy or Theology

* One Elective (in second term) from
Biology 101
Geot. Sc. 202
Mathematics 121

* Those students wishing to continue in Biology must choose the Biology 101 elective.

- (a) The Biology-Chemistry Major (for Arts and Science) will be discontinued in the first year in 1967-68, in the second year after 1967-68, in the third year after 1968-69, and in the fourth year after 1969-70.
- (b) The B.Sc. Biology Programmes will be introduced in first year in 1967-68, in second year in 1968-69, in third year in 1969-70, and in fourth year in 1970-71. The Department reserves the right to make any necessary changes in the courses to be offered.

The Biology Major Programme will prepare the student for Medical, Dental and other advanced studies.

The Biology Programme is a more generalized programme which will prepare the student for technical positions in government, industry, hospital and university laboratories and research.

101 Introduction to Biology. Half Course. K. S. Dhindsa

The fundamental principles of Biology that are common to all living organisms. The course is a prerequisite for all other courses in the Biology Major Programme.

Lectures: two per week in the second term.

Laboratory: three hours per week in the second term.

131 Fundamentals of Biology. Full Course. Staff

This is the same course as Biology 101 of former years. A series of lectures designed to acquaint the general Arts students with those fundamental principles of life which are the basis for an understanding of the structure and function of the living body.

Lectures: three per week for two terms.

202 Invertebrate Zoology. Full Course. R. T. Cronin

Theory. The course begins with a study of scientific methodology and its application to the living sciences. The nature and characteristics of protoplasm are explained and these are correlated with a discussion of the cell as the unit of structure and function. These basic principles are then utilized in a detailed study of the phyla of the invertebrate animals.

Laboratory. A detailed study of representative animals of the invertebrate phyla. The first part offers intensive exercises in the use of the microscope and the interpretation of microscopic sections. The second half affords training in manual dexterity necessary for precise dissection.

Lectures : 2 hours per week for two terms.

Lab. : 3 hours per week for two terms.

Text : Storer and Usinger, *General Zoology*, McGraw-Hill.

***211 Avascular Plants. Full Course.**

***221 Invertebrate Zoology. Full Course.**

231 General Zoology. Full Course. K. S. Dhindsa

This is the same course as Biology 221 of former years. A study of the zoological principles of structure, function and development in a selected series of invertebrate and vertebrate animals. Registration is limited to students in the Psychology Major Programme.

Lectures : two per week for two terms.

Laboratory : three hours per week for two terms.

Text : Storer and Usinger, *General Zoology*, McGraw-Hill.

***301 General Biochemistry. Full Course.**

***302 Introductory Embryology. Full Course.**

***303 General Physiology. Full Course.**

304 Vertebrate Zoology Theory. Full Course. S. Drummond

The course opens with a study of the characteristics and classification of the vertebrates. The basic structure of the vertebrate body is outlined. Following this, the important type vertebrates are studied in detail, particular stress being laid on embryological development, structure and function.

Prerequisite : Biology 202 Theory.

Lectures : 2 hours per week for two terms.

Text : Storer and Usinger, *General Zoology*, McGraw-Hill.

305 Vertebrate Zoology Laboratory. Half Course.

S. Drummond

The course comprises a detailed study of the structure of amphioxus, dogfish, frog and rabbit. The course is so conducted that, by training in exact dissection, observation and the preparation of carefully executed drawings, the student may be able to trace the main features of organization from the lower to the higher vertebrates.

Prerequisite : Biology 202 Lab.

Lab. : 6 hours per week for two terms.

Text : Storer and Usinger, *General Zoology*, McGraw-Hill.

Craigie-Bensley, *Practical Anatomy of the Rabbit*. Univ. of Toronto Press.

***311 Vascular Plants. Full Course.**

***321 Comparative Vertebrate Anatomy. Full Course.**

331 Introductory Neurology. Full Course. S. Drummond

A study of the nervous system of the vertebrates, especially the mammal. The course is offered to students in the Department of Psychology who intend to continue in physiological psychology.

Lectures : two per week for two terms.

Laboratory : three hours per week for two terms.

Text :

Prerequisite : Biology 231 or equivalent.

***401 Comparative Histology. Full Course.**

***402 Genetics. Full Course.**

***403 Cytology. Full Course.**

***404 Radiation Biology. Full Course.**

***405 Biophysics. Full Course.**

406 Histology. Half Course.

S. Drummond

Theory. An introductory study of the cell, cell division and the general tissues. The course is designed to explain in detail the structure and function of the basic tissues and to introduce the various combinations of these in the special tissues of the adult body.

Laboratory. A series of exercises designed to introduce the student to the fundamentals of cytological and histological technique, and to illustrate, by means of prepared slides, mitosis, meiosis, as well as the microscopic characteristics of the basic types of histological tissues.

Lectures : 2 hours per week for one term.

Lab. : 3 hours per week for one term.

408 Genetics. Half Course.

R. T. Cronin

Theory. A series of lectures designed to explain the principles of heredity and variation.

Laboratory. A selection of experiments to demonstrate the methods and principles of genetics.

Lectures : 2 hours per week for one term.

Lab. : 3 hours per week for one term.

***414 Bacteriology. Full Course.**

* This course will not be offered in 1967-68.

business administration



J. R. Hanrahan, Assistant Professor (Chairman)

P. Kawaja, Assistant Professor

H. B. Ripstein, Assistant Professor

W. R. Bannister, Lecturer

L. J. Boyle, Lecturer

C. Prevost, Sessional Lecturer

L. A. Saint-Pierre, Sessional Lecturer

Courses leading to a B.Comm. with a Major in Business Administration

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Accounting 101	Accounting 202	BUSINESS 305	BUSINESS 401
Economics 100	BUSINESS 204	Economics 308	BUSINESS 410-420
English	BUSINESS 207	Philosophy	BUSINESS (Elective)
French	French	Two Electives	English
Mathematics 101	Philosophy		One Elective
Theology	Theology		

1) Elective courses must be approved by the Department of Business Administration.

2) It may be necessary to limit enrolment in some of the above courses.

201 Commercial Law. Full Course.

Laws of contracts, sales agency, partnership, company law and negotiable instruments.

204 Business Economics. Full Course.

This course consists of three main elements: (1) an explanation of the fundamental theoretical and analytical tools of economics; (2) a review of empirical studies and illustrations of the applications of economic analysis in management; and, (3) cases involving actual managerial situations which require the use of analysis.

Prerequisite: Economics 102.

207 Mathematical Analysis for Management. Full Course.

An introduction to differentiation and integration, including applications of the derivative to business problems. Emphasis is placed on probabilistic models, linear system and the mathematics of finance. The use of these techniques in business will be demonstrated through cases and assigned problems.

Prerequisite: Mathematics 101.

305 (See Accounting 305)**401 Finance. Full Course.**

A study of the corporate investment in assets and the source of funds available to finance this investment. Emphasis is placed on statement analysis and short term financing. The use of preferred and common stock and long term debt is examined from the viewpoint of the corporation and the investor.

Prerequisite: Accounting 101.

410 Administration of the Firm. Half Course. First term only.

An introduction to the basis of management through a study of principles, a description of the various schools of management theory, the functions of the manager, and a brief inquiry into the major foundations of management-authority and responsibility. The managerial functions of planning, organizing, staffing, direction and control are analysed and described. Extensive use is made of cases.

411 Policy Determination and Operations. Half Course. Second term only.

An integrative course in which cases relating to a few corporations are used to expose students to the conditions under which management is accomplished. Students are organized into a task force to deal with a continuing series of problems.

417 Operations Analysis. Full Course.

A study of operations research techniques such as queueing theory, inventory theory, linear programming, the Monte Carlo method and search theory and the application of these to marketing, production and administrative problems.

Prerequisite: Business or Economics 207.

420 Marketing Management. Half Course. Second term only.

An introductory course that examines the job of the marketing manager. Factors affecting consumer demand and methods of satisfying it; project management; marketing channels management; management of selling and consumer services; management of pricing; marketing planning and control.

421 Sales Management. Half Course. Second term only.

This course deals with: (1) the principles and policies of sales organization and some typical sales organizational structures; (2) sales operation, including such topics as selecting, training, compensating, supervising and stimulating salesmen; (3) sales planning, including such tasks as determining sales and market potentials, forecasting sales, preparing sales department budgets and establishing territories and quotas; (4) an analysis of sales operation and evaluation of salesmen's productivity and effectiveness.

422 Advertising Management. Half Course. Second term only.

A general introduction to the field of advertising through lectures and case discussion. The advertising function and how it relates to marketing; history, function and purpose; agency revenues and how they are derived; agency organization and client relationships; campaign planning; copywriting and advertising art; media planning and execution; print and broadcast production; marketing and advertising research; publicity; public relations, sales promotion and merchandising; accounting and cost control; billing methods; the future of advertising and its role in the economy.

chemistry

Rev. A. Graham, S.J., Associate Professor (Chairman)

K. Ekler, Associate Professor

D. McElcheran, Associate Professor

T. Nogrady, Associate Professor

M. Doughty, Assistant Professor

G. J. Trudel, Assistant Professor

R. H. Zienius, Assistant Professor

M. Baldwin, Sessional Lecturer

G. Uihlein, Sessional Lecturer

Courses Leading to an Honours B.Sc. in Chemistry.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
CHEMISTRY 101	CHEMISTRY 211	CHEMISTRY 313	CHEMISTRY 425
CHEMISTRY 102	CHEMISTRY 212	CHEMISTRY 323	CHEMISTRY 426
French	CHEMISTRY 221	CHEMISTRY 324	CHEMISTRY 435
Mathematics 131	CHEMISTRY 222	CHEMISTRY 332	CHEMISTRY 436
Mathematics 120	CHEMISTRY 231	CHEMISTRY 333	CHEMISTRY 437
Physics 101	Philosophy	CHEMISTRY 334	CHEMISTRY 438
Theology	Theology	English	CHEMISTRY 450
One Elective (in second term) from:	(Mathematics 205 ¹)	Mathematics 332	English ¹
Biology 101	Mathematics 232 ²	Philosophy	Philosophy
Geot. Sc. 202	Physics 205	Physics 205	or Theology
Mathematics 121	(theory)		

Courses leading to a B.Sc. with a Major in Chemistry.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
CHEMISTRY 101	CHEMISTRY 212	CHEMISTRY 211	CHEMISTRY 332
CHEMISTRY 102	CHEMISTRY 221	CHEMISTRY 313	CHEMISTRY 334
French	CHEMISTRY 222	CHEMISTRY 323	CHEMISTRY 425
Mathematics 131	CHEMISTRY 231	CHEMISTRY 324	CHEMISTRY 426
Mathematics 120	Philosophy	CHEMISTRY 333	English ²
Physics 101	Theology (or Mathematics 205 ¹)	English	Philosophy
Theology	Mathematics 232 ²	Philosophy	or Theology
One Elective (in second term) from: Biology 101 Geot. Sc. 202 Mathematics 121		Theology (if necessary)	

Courses leading to a B.Sc. in Chemistry.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
CHEMISTRY 101	CHEMISTRY 212	CHEMISTRY 231	CHEMISTRY 313
CHEMISTRY 102	CHEMISTRY 221	CHEMISTRY 222	CHEMISTRY 324
French	Theology	CHEMISTRY 213	Philosophy
Mathematics 131	Philosophy	Philosophy	or Theology
Mathematics 120	Mathematics 205 ¹	English	One Elective
Physics 101	Mathematics 232 ²	One Elective	
Theology			
One Elective (in second term) from: Biology 101 Geot. Sc. 202 Mathematics 121			

1. Given for the last time in 1967-68.

2. To replace Math. 205 in 1968-69 and thereafter.

3. To be given in 4th year only in 1967-68.

101 General Chemistry. Full Course. M. Doughty, K. Ekler, G. J. Trudel, R. H. Zienius

Principles of Chemistry. Molecular and Atomic theories. Balancing Equations. Valence. Oxidation-reduction. Nature and concentrations of solutions. Chemical Equilibrium, Ionization constants. Solubility product. Common ion effect. pH. Formation and dissolution of precipitates. Complex ions. Theory of acids and bases. Periodic table.

Lectures: 3 hours per week for two terms.

Texts: Sisler, *College Chemistry*. 2nd ed., Macmillan. Sorum, *Introduction to Semimicro Qualitative Analysis*. 3rd ed., Prentice-Hall. Schaum, *Theory and Problems for Students of College Chemistry*. 4th ed., Schaum.

102 General Chemistry. Half Course. M. Doughty, G. J. Trudel, G. Uihlein, H. Wilson, R. H. Zienius

An introductory course designed to improve manipulative ability in the laboratory. A first semester of inorganic preparations and volumetric titrations is followed by one devoted entirely to qualitative analysis.

Lab.: 3 hours per week for two terms.

Text: Sorum, *Semimicro Qualitative Analysis*, 3rd ed., Prentice-Hall.

211 Inorganic Chemistry and Valence Theory. Half Course. K. Ekler

Atomic and Molecular Structure. Valence. Electro-negativity. Bond angles and lengths. Coordination chemistry. Chemical periodicity.

Lectures: one hour per week for two terms.

212 Elementary Inorganic Quantitative Analysis. Full Course. K. Ekler, G. J. Trudel, R. H. Zienius

Theoretical aspects of gravimetric and volumetric analysis. Acid-base and oxidation-reduction titrations. Determination of ores by volumetric methods. Theory of precipitation and complex formation analysis.



CHEMISTRY LABORATORY

Prerequisite : Chemistry 101.
Lectures : 1 hour per week for two terms.
Lab. : 3 hours per week for two terms.
Text : Kolthoff and Sandell, *Quantitative Inorganic Analysis*. Macmillan.

213 Industrial Chemistry. Half Course.

221 Organic Chemistry Theory. Full Course. M. Doughty
Introductory course in nomenclature, type reactions and synthesis of aliphatic, alicyclic and aromatic hydrocarbons and their derivatives. Theoretical aspects including resonance, orbital theory and simpler reaction mechanisms are introduced.
Prerequisite : Chemistry 101.
Lectures : 3 hours per week for two terms.
Texts : English and Cassidy, *Principles of Organic Chemistry*. McGraw-Hill. Werner Herz, *The Shape of Carbon Compounds*. Benjamin.

222 Organic Chemistry Laboratory. Half Course.

A. Graham, T. Nogrady, M. Baldwin
A systematic preparation of simpler organic compounds; the theory of fundamental techniques such as steam distillation; filtration; the determination of physical constants. To be taken in conjunction with Chemistry 221.
Prerequisite : Chemistry 102.
Lab. : 3 hours per week for two terms.
Text : Cason and Rapoport, *Basic Experimental Organic Chemistry*, Prentice-Hall.

231 Introductory Physical Chemistry. Full Course.

D. McElcheran
The principles of physical chemistry, based on elementary kinetic theory and thermodynamics. Includes the following topics: the gas state, first and second laws of thermodynamics, liquid and solid states, solutions, homogeneous and heterogeneous equilibria, reaction kinetics, electrochemical phenomena. Problems form an integral part of the course.
Lectures : 3 hours per week for two terms.

313 Instrumental Analysis. Full Course.

Staff
A study of modern instrumental methods in inorganic and organic analysis. Electro-chemical absorption, optical and radio-chemical methods, mass spectrometry, chromatography, NMR and X-ray diffraction are discussed.
Prerequisite : Chemistry 212, 221, 231.
Lectures : 2 hours per week, first semester.
Lab. : 3 hours per week, second semester.

323 Organic Chemistry Theory. Full Course.

T. Nogrady, G. J. Trudel
Selected topics of polymer and natural products chemistry, including carbohydrates, proteins, terpenes and steroids, heterocyclics and alkaloids. Reaction mechanisms and stereochemical aspects are treated extensively. The biological significance of many compounds is stressed.
Prerequisite : Chemistry 221.
Lectures : 2 hours per week for two terms.
Reference : Fieser and Fieser: *Topics in Organic Chemistry*. Reinhold. Roberts and Caserio: *Basic Principles of Organic Chemistry*. Benjamin.

324 Identification of Organic Compounds. Full Course.

M. Doughty, A. Graham
Theory and practice of organic qualitative analysis; most of the laboratory time is given to the identification of unknown compounds and the separation and identification of a simple mixture.
Prerequisite : Chemistry 222.
Lectures : 1 hour per week for two terms.
Lab. : 3 hours per week for two terms.
Text : Shriner, Fuson and Curtin, *The Systematic Identification of Organic Compounds*, Wiley.

332 Advanced Physical Chemistry. Full Course.

D. McElcheran
Selected topics include: structure of solid state, surface phenomena, the colloidal state, phase rule.
Prerequisite : Chemistry 231.
Lectures : 3 hours per week for one term.

333 Physical Chemistry Laboratory. Half Course.

D. McElcheran
To be taken in conjunction with Chemistry 332.
Lab. : 4 hours per week (one afternoon) for one term.
Text : Daniels et al., *Experimental Physical Chemistry*. 5th ed., McGraw-Hill.

334 Thermodynamics. Full Course.

D. McElcheran
A thorough study of classical thermodynamics. Considerable emphasis placed on physical as well as chemical application.
Prerequisite : Chemistry 231; Mathematics 205.
Lectures : 3 hours per week for one term.

425 Organic Chemistry Theory. Full Course.

T. Nogrady
An advanced study of physical organic chemistry and stereochemistry. The electron theory of reaction mechanisms such as nucleophilic aliphatic substitution, elimination and addition reactions, aromatic substitution, free radical mechanisms, are discussed in depth. Modern concepts of stereochemistry and conformational analysis are also covered.
Prerequisite : Chemistry 323.
Lectures : 2 hours per week for two terms.
Texts : R. Breslow : *Organic Reaction Mechanisms*, Benjamin. K. Mislow : *Introduction to Stereochemistry*, Benjamin. Reference : Smith and Cristol : *Organic Chemistry*, Reinhold.

426 Organic Preparation Laboratory. Full Course.

M. Doughty, T. Nogrady
The student performs a varying series of more difficult preparations and is expected to become proficient in such techniques as vacuum distillation, catalytic hydrogenation and the manipulation of larger scale bench equipment. A sound knowledge of theory is required.
Prerequisite : Chemistry 222, 324.
Lab. : 6 hours per week for two terms.
Texts : Vogel, *A Text-Book of Practical Chemistry*, Longmans. Fieser : *Organic Experiments*, Heath.

435 Advanced Physical Chemistry Laboratory. Half Course.

D. McElcheran
A continuation of Chemistry 333, but fewer and more demanding experiments.
Prerequisite : Chemistry 333.
Lab. : 4 hours per week for one term.

436 Electrochemistry. Half Course.

K. Ekler

Electrolytic conduction and electrolysis: Faraday's laws; specific and equivalent conductance and measurement of conductance; mobility and transport number; theory of strong electrolytes; thermodynamics of cells; electrode potentials; concentration cells; liquid junction potentials; overvoltage and polarization phenomena.

Prerequisite: Chemistry 332, 334.

Lectures: 2 hours per week for one term.

437 Kinetic Theory and Chemical Kinetics. Half Course.

D. McElcheran

The Classical atomic theory. Kinetic theory of gases; the statistical mechanical approach to the Maxwell-Boltzman Distribution; Collision phenomena. Reaction Kinetics. The rate laws; Classical collision theory; Activated State Theory; Reaction Mechanisms; Free Radical chemistry; Chain processes.

Prerequisite: Chemistry 332, 334.

Lectures: 2 hours per week for one term.

438 Quantum Chemistry. Half Course.

D. McElcheran

The transition from classical to modern physics. Michelson-Morley experiment — special theory of relativity, Planck's Black Body Radiation. Photoelectric effect; Radioactivity and the fundamental particles; the Rutherford-Bohr atom. Schrodinger Wave equation; Atomic Spectra, Molecular structure and bonding.

Lectures: 2 hours per week for one term.

450 Senior Thesis. Half Course.

Staff

The Department will make available to selected students a senior thesis in Organic or Physical Chemistry to be done in the second term. Students taking Chemistry 450 will not take Chemistry 426 in second term.

Lab.: 6 hours per week in the second term.

classics .

J. E. Lempkowski Assistant Professor
(Acting Chairman)

D. Brown Assistant Professor

T. Hoey, S.J. Associate Professor

J. Jope Assistant Professor

Mrs. E. Preston Lecturer

Mrs. B. Wardy Lecturer

The requirements in Classics for Arts students may be fulfilled in the following ways:

a) Classics 102, 202.

b) Classics 111 and 112, or 112 and 212.

c) Classics 121, 221.

Note: all students in Greek and Latin are required to provide themselves with dictionaries.

Courses leading to a B.A. with a Major in Classics

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
CLASSICS 102	CLASSICS	CLASSICS 302	CLASSICS 303
English 101	(Two Electives	CLASSICS 402	CLASSICS 403
French	from: 111, 112	Theology	Philosophy
Mathematics 101	and 330)	Two Electives	Two Electives
or Science 101	English		
Two Electives	French		
	Philosophy		
	Theology		

102 Latin Literature and Prose Composition. Full Course.

E. Preston, B. Wardy

Cicero's *Pro Archia*, selections from the poems of Catullus and the *Odes* of Horace. Latin grammar is studied principally for the better comprehension of the authors, but also for the development of some facility in prose composition.

Prerequisite: Junior Matriculation Latin or Classics 101.

Lectures: 3 hours per week for two terms.

111 Elementary Greek. Full Course.

J.E. Lempkowski

A course for those with no previous knowledge of Greek.

Lectures: 3 hours per week for two terms.

112 The Character of Socrates. Full Course.

D. Brown

A study of Socrates as he is portrayed in Plato's *Apology* and *Crito*, and caricatured in Aristophanes' *Clouds*.

Prerequisite: Junior Matriculation Greek or Classics 111.

Lectures: 3 hours per week for two terms.

121 Classics in Translation. Full Course.

D. Brown and J. E. Lempkowski

A. The Greek and Roman Historians.

An examination of the ancient historians' estimate of man's moral and social behavior, and the role he plays in the developments of his time.

B. The Classical Epic.

A study of the heroic character in the epics of Homer, Apollonius of Rhodes and Virgil.

Lectures: 3 hours per week for two terms.

202 Latin Literature and Prose Composition. Full Course.

E. Preston, B. Wardy

Cicero's *Pro Lege Manilia*, and Books 2, 4 and 6 of the *Aeneid*. Advanced work in grammar and prose composition.

Prerequisite: Classics 102.

Lectures: 3 hours per week for two terms.

212 Plato: The Republic. Full Course.

J. Jope

Prerequisite: Classics 112.

Lectures: 3 hours per week for two terms.

213 Greek Literature. Full Course. (Not offered in 1967-68)

Demosthenes' *Philippics* and Euripides' *Alceste*.

Prerequisite: Classics 112.

Lectures: 3 hours per week for two terms.

221 Classics in Translation. Full Course.

J. Jope, J. E. Lempkowski

- A. Greek Drama.
A study of selected plays by Aeschylus, Sophocles, Euripides, and Aristophanes.
- B. Roman Satire.
The origin and development of the literary form which the Romans considered to be particularly their own. The *Satires* of Horace and Juvenal, Petronius' *Satyricon*.
Lectures : 3 hours per week for two terms.

302 Latin Literature. Full Course.

J. Jope

Lucretius, *De Rerum Natura*.
Prerequisite : Classics 202.
Lectures : 3 hours per week for two terms.

303 Roman History and Biography. Full Course. (Not offered in 1967-68)

Livy, Book 1; Tacitus, *Agricola*. A consideration of the methods and styles of the two writers.
Prerequisite : Classics 202.
Lectures : 3 hours per week for two terms.

312 Herodotus and the Lyric Poets. (Not offered in 1967-68)

Prerequisite : Classics 212.
Lectures : 3 hours per week for two terms.

313 Homer. Full Course.

Extensive readings from the *Iliad* and *Odyssey* in Greek; both epics in their entirety in English.
Prerequisite : Classics 212.
Lectures : 3 hours per week for two terms.

330 The History of Ancient Greece and Rome. Full Course.

D. Brown

Lectures : 3 hours per week for two terms.

402 Roman Comedy. Full Course.

J. E. Lempkowski

Plautus, *Menaechmi*; Terence, *Hautontimoroumenos* and *Adelphi*.
Prerequisite : Classics 202.
Lectures : 3 hours per week for two terms.

403 Roman Satire. Full Course. (Not offered in 1967-68)

Horace, Juvenal, and Petronius' *Cena Trimalchionis*.
Prerequisite : Classics 202.
Lectures : 3 hours per week for two terms.

412 Greek Tragedy. Full Course. (Not offered in 1967-68)

Aeschylus' *Agamemnon*, Sophocles' *Oedipus Rex*, and Euripides' *Hippolytus* in Greek; the entire *Oresteia* and the *Poetics* in English.
Prerequisite : Classics 312.
Lectures : 3 hours per week for two terms.

communication arts

Rev. J. E. O'Brien, S.J. Assistant Professor (Chairman)
J. Buell Professor

Rev. M. Gervais, S.J. Assistant Professor
D. R. Clark, Lecturer

Mrs. Gail Valaskakis Lecturer

C. F. Gagnon Guest Artist and Special Lecturer

M. Slade Special Lecturer

R. Dolinsky Technical Supervisor

Courses leading to a B.A. with a Major in Communication Arts

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 or 112, or 121	Classics 112 or 202 or 212 or 221	COMMUNICATION ARTS 300	COMMUNICATION ARTS 400
English 101	COMMUNICATION ARTS 200	COMMUNICATION ARTS	COMMUNICATION ARTS
French	English or COMMUNICATION ARTS 210	(Two Electives) Philosophy One Elective *	(Two Electives) Theology One Elective
Mathematics 101 or Science 101	French Philosophy One Elective *		
Two Electives			

* One theology course is required in either first, second, or third year.

Objectives and Curriculum of Department

The Department bases its work in communication theory, cinema, radio, and television on a solid foundation in the liberal arts.

The curriculum is intended to develop in students a scholarly and creative approach to mass media. It is designed :

1. for students who intend to continue graduate studies in communication;
2. for students who intend to make a career in the public arts as writers, critics, directors, and performers;
3. for students who wish to enter the teaching profession as specialists in cinema and television education;
4. for students who intend to enter the media industries, the media professions, and the public arts in the areas of publicity, promotion, advertising, and public relations.

A major in Communication Arts may choose one of these three basic course sequences : adjustments in these sequences are possible with the approval of the Department.

Sequence No. 1	Sequence No. 2	Sequence No. 3
Course No. 200 ✓	Course No. 200	Course No. 200
270 J	300	300
300 J	320	310
310	330	320
330	340	400
340	350	440
350	400	One elective
360	One elective	
400 J		
460		

N.B. Courses 270 and 360 may be taken in addition to the regular program sequences.

Description of Courses

200 Philosophies of Communication. Full Course.

J. E. O'Brien

A course examining the presuppositions which underlie both the process and the art of communicating ideas, including their nature, scope, and purpose, with a view to understanding the function of the art and improving its practice in the mass media.

210 Drama and Theatre in the Western World. Full Course.

J. Buell

A study of the Greek, Medieval-Elizabethan, and Modern forms of drama in their theatrical and cultural contexts. The plays chosen will be studied mainly from two viewpoints: (a) drama-form and dramatic technique, and (b) significance as embodied in the cultural symbols of the period (myth, religion, psychology). A fairly wide background reading in plays and cultural history will be required from the student.

270 Fundamentals of Radio Production. Full Course. (Lab.)

D. Clark

This course is designed to give the student (1) a working knowledge of all the basic elements involved in a radio program's production and (2) practical creative experience in the production of all the basic radio program formats.

300 Mass Media and Cultural Forms. Full Course. J. Buell

A study of the communicational and art forms of film, radio, television, and print. The course will examine among other things: the evolution of the traditional dramatic and fictional arts into their mass-medium forms, the actual forms and formats necessitated by the mass media, the basic function of image and symbol in mass communication and art, the entertainment aspect of mass reception, and current practices, problems, and possible developments in these fields.

310 Writing for Mass Media. Full Course.

J. Buell

A course designed to stimulate the student's critical and creative faculties in areas of the mass media, through the analysis of basic forms and preparation and organization of original material for the media.

320 Communication by Speech. Full Course. G. Valaskakis

A study of speech forms and situations as basic personal communication, this course is designed to provide knowledge and training in "live" oral communication (person to person communication, group discussion and dynamics, formal speaking situations) and in "mediated" oral communication (as shaped by a medium: radio, television, film, the microphone).

330 History of Cinematic Art. Full Course. M. Gervais

A study of great periods of film history and of certain masters, including the contemporaries.

340 Visual Contexts and Strategies of Perception. Half Course.

M. Slade

An exploration of contemporary environments created by moving images and their interaction with more established modes of expression. Through experiment with a rich variety of visual materials, emphasis is on discovering patterns and relationships in the functional context of individual experience. Discussion and research approach is required.

350 Documentary Film. Half Course.

D. Clark

A study of the international documentary film movement, its functions and techniques, and of the lives and works of important documentary directors. Screenings of representative films.

360 Fundamentals of Film and Television Production. Full Course. (Lab.)

G. Gagnon and D. Clark

370 Advanced Radio Production. Half Course. (Lab.)

D. Clark

400 Mass Communications and Society. Full Course.

J. E. O'Brien

A study of the origins, development, structure and function, control and support of mass communications with emphasis on the content, the audience, and the social effects of the mass media.

410 Seminar in Creative Writing. Full Course.

J. Buell

The course is designed to allow the talented beginning writer to develop his vision, skills, and judgment in whatever fictional form suits his particular talent; prose narrative and the various dramatic forms defined by different media. The procedure of this seminar is practical: the aim is the finished work of art. The standards are ultimately professional, arising as they do from the exigencies of the art-form itself. Instruction in technique is designed to give the writer a greater awareness of the nature and artistic scope of his chosen form or forms, and to furnish the guidelines for future development. Study, at the needed times, will be an intensive artistic and technical examination of works suited to the level and aspiration of the beginning writer.

Acceptance into the Seminar will be based primarily on the quality and promise of submitted work.

430 Film Aesthetics and Criticism. Full Course. M. Gervais

An analysis of different schools and tendencies in cinema, including discussion of theories, theorists, and critics.

440 Advertising and Public Relations. Full Course.

J. E. O'Brien

- (a) A study of advertising as mass communication in marketing, this course will examine among other things the social and economic effects of advertising, the principles of effective copy, layout, and design, and the rationale behind present-day media strategies.
- (b) A study of the nature, organization, and function of the corporate image for various sectors of the public, as clarified by case analysis of present-day industries.

450 Seminar in Communication Research. Full Course. Staff**460 (a) Advanced Film Production. Full Course. (Lab.)**

Staff

OR

(b) Advanced Television Production. Full Course. (Lab.)**Prerequisite:** Communication Arts 270 and 360.**computing centre*****010 Fortran Programming.**

A non-credit course offered to all students on a voluntary basis. The course includes basic Fortran programming techniques and sufficient card handling to enable the student to compile and run his own programs on the IBM 1620. This course is offered twice in the academic year.
Lectures: 1 hour per week for 8 weeks.

***015 Machine Language Programming and SPS.**

A non-credit course offered to all students on the basis of a selection test. The course is designed for students with a good pre-college mathematical background or with prior programming experience. Basic IBM 1620 machine language including iterative routines for square root and other basic functions is emphasized. The Symbolic Programming System, automatic coding, and introduction to compilers are also included.
Lectures: 1 hour per week.

***105 Computers in Society. Full Course.**

A history of Computers and the impact of present day electronic computers on society. The Abacus and simple counting machines, Turing machines and elementary recursive functions, desk calculators and the modern electronic digital computers. Sociological and economic implications of automation. Interdiscipline contributions to the theory of computer science.
Lectures: 2 hours per week for two terms.

***201 Fortran Programming and Numerical Analysis. Full Course.**

A detailed study of fundamentals of digital computers and related machinery. Binary numbers, floating point arithmetic, flow charting, simple machine language instructions, automatic coding in Fortran, assemblers, compilers, etc. Numerical methods of interpolation, solution of polynomial equations and simultaneous equations, approximations, matrix manipulation, Monte Carlo techniques. Student use of the IBM 1620 will be emphasized.

Prerequisite: Mathematics 205 (First course in Calculus).

Lectures: 2 hours per week for two terms.

***305 Numerical Analysis and Fortran Programming for Engineers.**

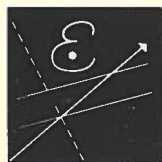
Offered only to engineering students as Engineering 350.

* No assurance can be given that these courses will be offered in 1967-68.



COMPUTING CENTRE

economics



F. J. Hayes Associate Professor (Chairman)
 S. A. Alvi Associate Professor
 B. Brody Assistant Professor
 J. M. Dauvergne Assistant Professor
 D. S. Herskowitz Assistant Professor
 A. G. Lallier Assistant Professor
 I. J. Masse Assistant Professor
 C. S. Papadantonakis Assistant Professor
 B. Wright Assistant Professor

Courses leading to an Honours B.A. in Economics

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111, or 112 or 121	ECONOMICS 221 ECONOMICS 260	ECONOMICS 304 ECONOMICS 366	ECONOMICS 461 or 464 or 480
ECONOMICS 100	French	Philosophy	ECONOMICS
English 101	Philosophy	Theology	(Two Electives)
French	Theology	One Elective	Two Electives
Mathematics 101 One Elective	One Elective		

Courses leading to a B.A. with a Major in Economics

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 or 112 or 121	Classics 112 or 202 or 212 or 221	ECONOMICS 304 ECONOMICS 306	ECONOMICS (Two Electives)
ECONOMICS 100	ECONOMICS 210	Philosophy	English
English 101	French	Theology	Two Electives
French	Philosophy	One Elective	
Mathematics 101 One Elective	Theology One Elective		

Courses leading to an Honours B.Comm. in Economics

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Accounting 101	ECONOMICS 221	ECONOMICS 304	ECONOMICS 461
ECONOMICS 100	ECONOMICS 260	ECONOMICS 366	or 464 or 480
English 101	French	Philosophy	ECONOMICS
French	Philosophy	Theology	(Two Electives)
Mathematics 101	Two Electives	One Elective	Two Electives
Theology			

Courses leading to a B.Comm. with a Major in Economics

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Accounting 101	Accounting 202	ECONOMICS 304	ECONOMICS
ECONOMICS 100	ECONOMICS 210	ECONOMICS 306	(Two Electives)
English 101	French	Philosophy	English
French	Philosophy	Theology	Two Electives
Mathematics 101	Two Electives	One Elective	
Theology			

Note: The Economics Department may permit a third year student to take one additional approved course, if a 70% average and a record clear of supplementals, repeat courses, etc., has been maintained in the preceding two years.

100 Principles of Economics. Full Course.

Staff

A survey of the existing economic order, with particular emphasis on the North American Economy. Concentration is on explaining the operation of the price system as it regulates production, distribution, and consumption, and as it in turn is modified and influenced by private organization and government policy. Consideration is also given to the determination of aggregate economic activity. The main areas studied include: the monetary and banking systems in the United States and Canada; the composition and fluctuations of national income; and the major conditions of economic growth; all as influenced by monetary, fiscal and other policies.

Lectures: 3 hours per week for two terms.

210 Intermediate Economic Theory. Full Course.

Staff

In this course consideration will be given to such topics as: theory and measurement of demand; production functions; cost analysis; price and output policy under various market conditions; factor pricing; income and employment theory.

Lectures: 3 hours per week for two terms.

221 Economic Method. (Honours). Full Course.

I. Masse

A study of selected topics in methods of economic analysis, including: the nature of valid arguments, the notion of sets of economic variables, the concept of rational behaviour, differential calculus, game theory, linear programming.

Lectures: 3 hours per week for two terms.

260 Intermediate Economic Theory (Honours). Full Course.

F. J. Hayes

Lectures: 3 hours per week for two terms.

302 Economic History. Full Course.

An analysis of the development of Western Europe, Canada and the United States.

Lectures: 3 hours per week for two terms.

303 Theories and Processes of Economic Growth and Development. Full Course.

S. A. Alvi

A consideration of various contributions by economists and others to an understanding of how societies grow and undergo institutional change. The course also includes a study of the problem of accelerating economic growth, with emphasis on selected developing nations of the present time, an analysis of the process of capital formation, the role of the state (in different politico-economic systems), the role of external assistance in economic development, and the economics of investment decisions. Emphasis is also given to the interaction of cultural change and economic development.

Lectures: 3 hours per week for two terms.

304 Applied Statistics. Full Course.

I. J. Masse and D. Herskowitz

The application of statistical methods to economic problems including curve fitting, trend lines, seasonal variation, the measurement of cyclical fluctuations, correlation and index numbers.

Lectures: 3 hours per week for two terms.

305 Economic Fluctuations. Full Course.

I. J. Masse

Statistical aspects of the business cycle, the Kitchin, Juglar and Kondratieff cycles; monetary, overinvestment, and under-consumption theories of the cycle; Schumpeter's theory; the influence of some strategic factors; an electric theory of the cycle; economic growth, policy.

Lectures: 3 hours per week for two terms.

306 Money, Banking, and Income Theory. Full Course.

C. S. Papadantonakis and B. Wright

The functions of money; money and prices; the evolution and kinds of money; the value of money; the supply of money; monetary and banking developments in Canada, the United States and the United Kingdom; the determinants of national income; the multiplier and acceleration principles, monetary and fiscal policy.

Lectures: 3 hours per week for two terms.

333 Comparative Economic Systems. Full Course.

A. G. Lallier

The evolution of economic systems is discussed and evaluated in terms of modern economic theory, and from the point of view of economic efficiency and development.

Lectures: 3 hours per week for two terms.

338 Labour Economics. Full Course.

B. Brody

History of the labour movement in Europe, Canada and the U.S.; labour problems; the economics of labour; collective bargaining; case studies; the social teaching of the Church; labour legislation in England, Canada and the United States.

Lectures: 3 hours per week for two terms.

366 Monetary and Income Theory (Honours). Full Course.

B. Wright

Lectures: 3 hours per week for two terms.

407 International Trade. Full Course.

J. M. Dauvergne

Historical and economic background of international trade; the theory of international trade; balance of payments; international capital movements; foreign exchange; international commercial policies; international organization dealing with commercial theory.

Lectures: 3 hours per week for two terms.

435 Public Finance. Full Course.

A study of the principles and practices of public, finance, with special reference to Canada

Lectures: 3 hours per week for two terms.

437 Canadian Economic Policy. Full Course.

F. J. Hayes

This course is devoted to examining economic policy in a number of selected areas.

Lectures: 3 hours per week for two terms.

461 History of Economic Thought. (Honours). Full Course.

A. G. Lallier

A critical review of economic thought since Plato and Aristotle.

Lectures: 3 hours per week for two terms.

464 Operations Analysis and Economic Theory. (Honours). Full Course.

C. S. Papadantonakis

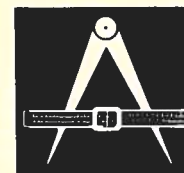
Application of mathematical techniques to economic analysis. Topics will include the Calculus, Theory of Determinants, Programming, etc., and their application to selected areas in Economic Theory: Production and Inventory Decisions, Linear Programming, Transportation Problems, Queues, Input-Output Analysis, Game Theory, Econometric Macromodels.

Lectures: 3 hours per week for two terms.

480 Macro-Economic Analysis (Honours). Full Course.

A critical study of selected topics in Aggregative Economic Analysis.

Lectures: 3 hours per week for two terms.

engineering

G. W. Joly Associate Dean
C. Goldman Associate Professor
K. I. Krakow Associate Professor
S. J. Kubina Associate Professor
Rev. H. Wardell, S.J. Assistant Professor
J. A. Krantzberg Lecturer
S. A. Neilson Lecturer
J. E. Orr Special Lecturer
K. D. Henderson Special Lecturer
C. K. Adkar Special Lecturer
D. Kaufman Special Lecturer

The Faculty of Engineering offers a five-year programme of studies in Chemical, Civil, Electrical and Mechanical Engineering. In 1967/8 the First, Second and Third Years of this programme will be presented. The offering of the Fourth and Fifth years will be delayed until Loyola's status as a university has been granted official recognition. In the meanwhile, arrangements have been made for students to transfer to the Fourth Year of other universities in the area.

The courses of the first year and the second year constitute a common programme for all students in them, while the courses of the third year provide specialized work in Chemical, Civil, Electrical and Mechanical Engineering.

Students of the First and Second Year of Engineering are invited to consult the Dean of Engineering or any member of the staff about the specialization in which they expect to engage in the Third and succeeding years.

promotion

For promotion, an overall average of at least 60% of the weighted marks is required, and at least 50% in each separate examination. A student who fails to achieve promotion and wishes to discuss the possibility of continuing his academic career in the Faculty of Engineering must apply IN WRITING to the Chairman, Engineering, before July 15.

admissions

The requirements for admission are as follows :

**Canadian Applicants
to first year :**

- For consideration for entry, an applicant must have :
 - achieved Junior Matriculation;
 - passed 11 papers in June, amongst which must be :
English (2 papers),
Intermediate Algebra,
Trigonometry,
Physics,
Chemistry;
 - achieved an overall average of at least 70% in these 11 papers and a good second class mark in the compulsory ones listed in b) above.
- Canadian applicants whose qualifications are different from those above should apply IN WRITING to Loyola College for a review of them.

**applicants from abroad
to first year :**

Applicants who consider that their qualifications are equivalent to those specified for Canadian students are invited to submit them to Loyola College for review.

First year engineering

COURSE	Course Number	Weighted Mark	Lecture hours per week		Labs. etc. hrs. per week	
			First Term	Second Term	First Term	Second Term
MECHANICS I	001	100	2	2	—	2
VECTOR ANALYSIS	101	100	2	2	—	—
ENGINEERING GRAPHICS I	201	100	—	—	3	3
PROFESSIONAL PRACTICE I	301	50	1	1	—	—
CHEMISTRY	101/2	150	3	3	3	3
ENGLISH	101	100	3	3	—	—
FRENCH	120	100	2	2	1	1
CALCULUS	110	100	3	3	—	—
HEAT & SOUND	103	100	2*	—	2	—
TOTAL :		900	18	16	9	9

*3 hrs/week, alternate weeks.

Second year engineering

COURSE	Course Number	Weighted Mark	Lecture hours per week		Labs. etc. hrs. per week	
			First Term	Second Term	First Term	Second Term
MECHANICS II	002	100	2	2	—	—
ENGINEERING PROBLEMS	102	50	—	—	2	2
ENGINEERING GRAPHICS II	202	100	1	1	2	2
PROFESSIONAL PRACTICE II	302	50	1	1	—	—
*TECHNICAL REPORT	313	Year 3	—	—	—	—
MATERIALS SCIENCE I	802	100	2	2	—	—
PHYSICAL CHEMISTRY	231	100	3	3	—	—
ALGEBRA	212	100	2	2	—	—
CALCULUS	210	100	3	3	—	—
**HEAT & SOUND	103	100	2	—	2	—
LIGHT & ELECTRICITY	206	150	2	2	2	2
PHILOSOPHY	—	100	2	2	—	—
THEOLOGY	101	100	2	2	—	—
TOTAL :		1150	22	20	8	6

*Prepared in summer following Year 2. Counted as part of Year 3.

Do not register in Year 2.

**In 1967/8 only. 3 hrs/week, alternate weeks.

Third year engineering — Chemical

COURSE	Course Number	Weighted Mark	Lecture hours per week		Labs. etc. hrs. per week	
			First Term	Second Term	First Term	Second Term
STR. OF MATERIALS I	033	100	2	2	—	—
NUMERICAL ANALYSIS & COMP.	133	50	2	—	2	—
***PROFESSIONAL PRACTICE III	303	—	—	—	—	—
*TECHNICAL REPORT	313	100	—	—	—	—
CHEM. ENGINEERING PRINC.	403	100	2	2	2	2
CIRCUIT ANALYSIS	633	100	2	—	3	—
ELECTRICAL ENGINEERING	643	100	—	3	—	3
INORG. QUANT. ANALYSIS	212	100	1	1	3	3
PHYS. CHEM. LAB.	333	100	—	—	4	—
DIFFERENTIAL EQUATIONS	312	100	2	2	—	—
ENGINEERING MATHS.	313	100	2	2	—	—
**ELECTRICITY & LIGHT	206	150	2	2	2	2
***PHILOSOPHY	—	—	—	—	—	—
***THEOLOGY	—	—	—	—	—	—
TOTAL :		1100	15	14	16	10

*Prepared in summer following Year 2.

**In 1967/68 only.

***Not required in 1967/68.

Third year engineering — Civil

COURSE	Course Number	Weighted Mark	Lecture hours per week		Labs. etc. hrs. per week	
			First Term	Second Term	First Term	Second Term
STR. OF MATERIALS I	033	100	2	2	—	—
MECH. OF MACHINES	053	50	2	—	3	—
***SYSTEMS ANALYSIS	103	—	—	—	—	—
NUMERICAL ANALYSIS	133	50	2	—	2	—
***PROFESSIONAL PRACTICE III	303	—	—	—	—	—
*TECHNICAL REPORT	313	100	—	—	—	—
SURVEYING	523	50	2	—	2	—
CIRCUIT ANALYSIS	633	100	2	—	3	—
ELECTRICAL ENGINEERING	643	100	—	3	—	3
MATERIALS SCIENCE III	813	50	—	—	—	3
****GEOLOGY	202	100	—	3	—	3
DIFFERENTIAL EQUATIONS	312	100	2	2	—	—
ENGINEERING MATHS.	313	100	2	2	—	—
**ELECTRICITY & LIGHT	206	150	2	2	2	2
***PHILOSOPHY	—	—	—	—	—	—
***THEOLOGY	—	—	—	—	—	—
TOTAL :		1050	16	14	12	11

*Prepared in summer following Year 2.

**In 1967/68 only.

***Not required in 1967/68.

****New course in 1968/69.

Third year engineering — Electrical

COURSE	Course Number	Weighted Mark	Lecture hours per week		Labs. etc. hrs. per week	
			First Term	Second Term	First Term	Second Term
STR. OF MATERIALS I	033	100	2	2	—	—
SYSTEMS ANALYSIS	103	50	—	—	2	2
NUMERICAL ANALYSIS	133	50	2	—	2	—
***PROFESSIONAL PRACTICE III	303	—	—	—	—	—
*TECHNICAL REPORT	313	100	—	—	—	—
CIRCUIT ANALYSIS	623	150	2	2	3	3
SOLID STATE PHYSICS	653	100	—	3	—	—
MATERIALS SCIENCE III	813	50	—	—	—	3
DIFFERENTIAL EQUATIONS	312	100	2	2	—	—
ENGINEERING MATHS.	313	100	2	2	—	—
**ELECTRICITY & LIGHT	206	150	2	2	2	2
MODERN PHYSICS	303	50	3	—	—	—
***PHILOSOPHY	—	—	—	—	—	—
***THEOLOGY	—	—	—	—	—	—
TOTAL :		1000	15	13	9	10

*Prepared in summer following Year 2.

**In 1967/68 only.

***Not required in 1967/68.

Third year engineering — Mechanical

COURSE	Course Number	Weighted Mark	Lecture hours per week		Labs. etc. hrs. per week	
			First Term	Second Term	First Term	Second Term
STR. OF MATERIALS I	033	100	2	2	—	—
MECHANICS OF MACHINES	053	50	2	—	3	—
SYSTEMS ANALYSIS	103	50	—	—	2	2
NUMERICAL ANALYSIS	133	50	2	—	2	—
MECHANICAL DESIGN	203	50	—	—	—	3
***PROFESSIONAL PRACTICE III	303	—	—	—	—	—
*TECHNICAL REPORT	313	100	—	—	—	—
CIRCUIT ANALYSIS	633	100	2	—	3	—
ELECTRICAL ENGINEERING	643	100	—	3	—	3
EXPERIMENTAL ENGINEERING	703	50	—	1	—	2
MATERIALS SCIENCE II	803	100	1	—	3	3
DIFFERENTIAL EQUATIONS	312	100	2	2	—	—
ENGINEERING MATHS.	313	100	2	2	—	—
**ELECTRICITY & LIGHT	206	150	2	2	2	2
***PHILOSOPHY	—	—	—	—	—	—
***THEOLOGY	—	—	—	—	—	—
TOTAL :		1100	15	12	15	15

*Prepared in summer following Year 2.

**In 1967/68 only.

***Not required in 1967/68.

APPLIED MECHANICS

001 Mechanics I.

G. W. Joly and J. Krantzberg

Position, velocity and acceleration of a rigid body executing plane motion. Relative motion. A preliminary study of the dynamics of curvilinear plane motion in order to establish the principles of center of gravity and moment of inertia, followed by a development of these ideas in depth. So as to prepare the student for the later presentation of static equilibrium as a special case of dynamics, Mechanics I commences with the intuitional view of the conditions of static equilibrium through a study of simple space frames. The vector approach is used freely.

Lectures : 2 hours per week, both terms.

Problems : 2 hours per week, second term.

002 Mechanics II.

C. Goldman

The three general approaches to dynamics : torque and inertia-acceleration, work and kinetic energy, impulse and momentum. The selection of the appropriate general approach in each problem is emphasized and numerical results are expected. Forces in rotating bodies. Gyroscopes. The vector approach is used freely.

Lectures : 2 hours per week, both terms.

- 033 Strength of Materials I.** C. Goldman
Elastic Theory of matter; axial, thermal and bending stresses; combined stress, tension, deflection of beams by differential equation of elastic line, moment area, superposition and conjugate beam methods; statically indeterminate beams; energy of strain; introduction of photostress analysis and theory of models.
Lectures : 2 hours per week for both terms.
- 053 Mechanics of Machines.** K. I. Krakow
Analytical and graphical velocity, acceleration and force analysis of mechanisms; static and dynamic balancing of rotating and reciprocating mechanisms; design of cams, gears, gear trains.
Lectures : 2 hours per week, first term.
Problems : 3 hours per week, first term.

ENGINEERING ANALYSIS

- 101 Vector Analysis** G. W. Joly and J. Krantzberg
Position vectors, addition of vectors, angle between two lines, equation of plane in normal form, scalar product, projection of one line on another, vector product, shortest distance between a point and a line or plane, shortest distance between two lines, moment of a force about a point, moment of a force about a line, triple scalar product.
Lectures : 2 hours per week, two terms.
- 102 Engineering Problems.** C. Goldman
Solving of problems in Mechanics, and Mathematics. Great emphasis is laid on setting up problems in Engineering.
Lectures : 2 hours per week, two terms.
- 103 Systems Analysis.** K. Krakow
The application of Mathematics to the solutions of Civil, Electrical and Mechanical Engineering problems.
Text : Haberman, C. M. — *Engineering Systems Analysis*.
Lectures : 2 hours problems per week, both terms.
- 133 Numerical Analysis and Computation Methods.** S. Kubina
An introduction to Digital Computer Programming and associated methods of numerical analysis useful in the solution of engineering problems. Laboratory periods are devoted to the solution of problems using mechanical calculating machines and IBM 1620 Computer.
Lectures : 2 hours per week, one term.
Computer Lab. : 2 hours per week, one term.

ENGINEERING DESIGN.

- 201 Engineering Graphics I.** H. Wardell
Orthographic projection, auxiliary and oblique views, dimensioning, sectioning. Geometrical construction of ellipses, hyperbolas, cycloids, involutes, etc. Pictorial drawings including isometric, oblique. Common machine elements; screws, welding, structural shapes. Free-hand sketching, working and assembly drawings.
Lectures : 1 hour per week for two terms.
Lab. : 2 hours per week for two terms.
Text : French Engineering Drawing, McGraw-Hill.

- 202 Engineering Graphics II.** H. Wardell
Theory of orthographic projection, auxiliary views, lines, planes, intersections, dihedral angles, parallelism, perpendicularity, revolution, developments, mining and civil engineering problems involving principles covered in the course.
Lectures : 1 hour per week for two terms.
Lab. : 2 hours per week for two terms.
Text : Descriptive Geometry. Paré-Loving-Hill.
- 203 Mechanical Design.** K. I. Krakow
Mechanical design involving elementary stress analysis; relation between design and manufacturing techniques, presentation of design briefs.
Problems : 3 hours per week, 2nd term.

PROFESSIONAL PRACTICE.

- 301 Professional Practice I.** S. A. Neilson
Use of English, both oral and written in engineering practice, mechanics of presentation, graphical representation, reproduction methods, job applications; specifications.
Lecture : One hour per week, both terms.
- 302 Professional Practice II.** S. A. Neilson
Continuation of Course 301 with emphasis on Public Speaking — Conference Techniques, etc.
Lectures : 1 hour per week, both terms.
- 303 Professional Practice III.**
A course offered by the Accounting Department (310) to students in the Faculties of Arts, Science and Engineering: Includes explanation and use of Accounting; major forms of Business entities; analysis and interpretation of Financial Statements; control of business operations, budgeting and profit planning; function and use of Cost Accounting; Income Tax Theory; use of Machine Accounting; Commercial and Life Insurance; Estate Planning, including Gift Tax, Federal Estate Tax and Provincial Succession Duties.
- 313 Technical Report.** S. A. Neilson
Students entering the Third Year of Engineering must submit a Technical Report. The most suitable subject for the Report is a topic drawn from the experience during his summer work. If, however, a student's summer experience does not provide a reasonable topic, he may visit and inspect any engineering, scientific or industrial project in course of construction or operation, and write upon his observations. The Report should be between 2000 and 4000 words in length and must be handed in not later than Registration Day.

CHEMICAL ENGINEERING.

- 403 Chemical Engineering Principles.** K. D. Henderson
Application of physical and chemical principles to some fundamental problems in Chemical Engineering.
Lectures : 2 hours per week, both terms.
Lab. : 2 hours per week, both terms.

CIVIL ENGINEERING.**523 Surveying.**

C. Goldman

Types of surveys; description and use of level, compass, transit, chain and tape; levelling; traverses, stadia. Route surveys involving simple, spiral, and vertical curves. Grades, cross-sections, area and earth-work calculations. Use of planimeter; Triangulation; Hydrographic surveying.

Lectures : 2 hours per week, one term.

Lab. : 2 hours per week, one term.

ELECTRICAL ENGINEERING.**623 Circuit Analysis and Energy Conversion.**

S. Kubina

The fundamentals of the analysis of linear circuits to study, time varying, periodic and non-periodic currents, and voltages; node and loop analysis; network theorems; time frequency domain relationships; polyphase circuits; Fourier series, Laplace transforms; coupling elements and coupled circuits; ideal transformers; controlled sources. Semiconductor electronics. Simple amplifier circuits, frequency response. Simple rectifier and modulator circuits. Analysis of a communication and a power system.

Lectures : 2 hours per week, two terms.

Lab. : 3 hours per week, two terms.

633 Circuit Analysis.

S. Kubina

Analysis of the response of linear circuits to steady and time varying currents and voltages; node and loop analysis; network theorems; Laplace transforms; poly-phase circuits.

Lectures : 2 hours per week, one term.

Lab. : 3 hours per week, one term.

643 Electrical Engineering.

D. Kaufman

Elements of three phase circuits. D. C. machines, induction and synchronous machines and their terminal characteristics. Transistors, vacuum tubes and their equivalent circuits. Rectification and small signal amplifiers. Survey of a communications and dynamic measurement system. Feedback and control systems.

Lectures : 3 hours per week, one term.

Lab. : 3 hours per week, one term.

653 Solid State Physics.

C. K. Adkar

Elementary crystal structure. Waves in periodic media. Lattice vibrations. Free electron models. Thermionic emission. Energy bands. Semiconductors, conduction by holes and electrons, doping, junctions. Magnetic and dielectric properties of solids.

Lectures : 3 hours per week, one term.

MECHANICAL ENGINEERING.**703 Experimental Engineering.**

K. I. Krakow

Theory and use of instruments; measurement of temperature, pressure, fluid flow, power; analysis of combustion products.

Lecture : 1 hour per week, second term.

Lab. : 2 hours per week, second term.

MATERIALS SCIENCE.**802 Material Science I.**

J. E. Orr

A systematic approach to the study of properties and behaviour of engineering materials including, the fundamental properties of materials, metallic phases, multiphase materials, structural effects on properties, stability under service stresses; thermal, electrical, chemical properties and corrosion; organic and non-metallic materials.

Lectures : 2 hours per week for two terms.

803 Materials Science II.J. E. Orr, K. I. Krakow
H. Wardell, C. Goldman

A theoretical and experimental study of metallic and non-metallic materials, their properties and processes used to control and alter their properties, their mechanical behaviour and experimental techniques used in investigating their behaviour, and the relation between mechanical behaviour and the physical and chemical properties of materials. Introduction to destructive and non-destructive testing using strain gauge and photo stress techniques.

Lectures : 1 hour per week, 1st term.

Lab. : 3 hours per week for both terms.

813 Materials Science III.

C. Goldman

That part of Materials Science II relating to Strength of Materials.

Lab. : 3 hours per week, 2nd term.

english

A. G. Hooper Professor (Chairman)
M. Blonar Associate Professor
Rev. G. MacGuigan, S.J. Associate Professor
A. Newell Associate Professor
S. C. Russell Associate Professor
A. T. Broes Assistant Professor
P. Davies Assistant Professor
L. P. Nowicki Assistant Professor
A. Raff Assistant Professor
A. N. Raspa Assistant Professor
R. S. Wareham Assistant Professor
K. Waters Assistant Professor
T. Berns Lecturer
F. C. Faulkner Lecturer
R. K. Martin Lecturer

Courses leading to an Honours B.A. in English

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 or 112 or 121 English 101 French Mathematics 101 or Science 101 Two Electives	Classics 112 or 202 or 221-02 English 110, 130, 520, 620 Philosophy Two Electives	English 240, 250 and 270, and two of 245, 255, 110, 130 Two Electives	English 230, 120, 280, and two of 125, 245, 285, 110 Two Electives

Courses leading to a B.A. with a Major in English

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 or 112 or 121 English 101 French Mathematics 101 or Science 101 Two Electives	Classics 112 or 202 or 212 or 221 English 322, 352, 362, 442 French Philosophy One Elective	English 133 and one of 233, 253, 273 Three Electives	English, one of 233 or 244, and one of 133, 120, 280, 377, 527, 627 Three Electives

Note 1. Students will be encouraged to use electives either to build up a "minor", or to extend the number and scope of their courses in English or to take courses which are related to and supplement courses already chosen.

Note 2. Apart from English 101, all courses in the 100's are author courses, those in the 200's are period courses, in the 300's are genre courses, in the 400's are language courses, in the 500's are criticism courses, and in the 600's are "national" courses. Those ending in —0 and —5 are Honours courses, those in —2, —3 and —4 are second, third and fourth year major courses respectively, those in —7, —8, and —9 are second, third and fourth year general courses respectively.

099 First Year. Full Course. Non-credit. Staff

A course designed for those students who do not reach the desired level in the English Proficiency Test. It includes instruction in remedial reading, basic grammar and composition, and discussion of some literary texts.

Texts: to be announced.

3 hours per week for two terms.

101 First Year. Full Course. M. Blonar and Instructors

A required course for all first year students in Arts, Commerce and Engineering, designed to bring the student to a greater understanding and deeper appreciation of some of the great literary works in English, and to a higher level of self-expression, both oral and written. The course consists of lectures, seminar discussion groups, and tutorials. The presentation of written themes is on a weekly or bi-monthly basis depending on the skill and ability of the student.

Texts: to be announced.

3 hours per week (lecture — one hour; seminar — two hours) for two terms.

HONOURS COURSES

110 Chaucer. Half Course. A. G. Hooper

For Second year Honours students. An Elective for Third and Fourth Year Honours students. Second term. 3 hours per week.

120 Spenser and his Background. Half Course. Required for Fourth Year Honours students. First term.

R. S. Wareham

Spenser's works, in particular *The Shepheardes Calender* and *The Faerie Queene*: the background of Elizabethan politics; religion, ethics, psychology, and literary theory; the influence of Courtly Love, Humanism, and Neoplatonism; the traditions of pastoral, epic, romance, and allegory.

3 hours per week for one term.

125 Elizabethan Literature. Half Course. An Elective for Fourth Year Honours students. Second term.

R. S. Wareham

Guided research on one topic chosen by the student in consultation with the professor.

Prerequisite: English 120.

130 Shakespeare. Half Course. For Second Year Honours students. An Elective for Third Year Honours students. Second term. A. Newell

Shakespeare's plays — histories, tragedies, comedies — will be studied in relation to the Elizabethan theater and its tradition; the social, historical, and literary setting; Shakespeare's development as a dramatic artist; the body of Shakespearean criticism. An emphasis will be placed on appreciating each play as an individual creation.

3 hours per week.

230 The Seventeenth Century. Full Course. For Fourth Year Honours Students. A. N. Raspa

This course deals with the prose styles in the century as represented by Bacon, Browne and Donne, and with the poetry and poetic theory of the major Metaphysicals, Jonson and Milton.

3 hours per week for two terms.

240 Half Course. For Third Year Honours Students. First Term. M. Blonar

A study of the most important prose and poetry of John Dryden and Jonathan Swift within the framework of Restoration and Eighteenth-Century literary England.

Texts: Dryden, *Selected Works*. Holt, Rinehart and Winston. Dryden, *Three Plays*. Hill and Wang. Swift, *Gulliver's Travels and Other Writings*. Houghton Mifflin. Swift, *Selected Poems*. Collier-Macmillan.

Seminar: 3 hours per week.

245 Half Course. An Elective for Third and Fourth Year Honours Students. Second Term. M. Blonar

A continuation of the study of Eighteenth-Century Literature. A discussion and very close study of the works of Alexander Pope and Samuel Johnson, presented in a series of seminars by the students themselves.

Texts: Pope, *Poems*. (University Paperbacks) Methuen. Johnson, *Rasselas, Poems and Selected Prose*. Holt, Rinehart and Winston. James Boswell, *Life of Johnson*. Oxford Standard Authors.

Seminar: 3 hours per week.

250 English Romantic Poetry. Half Course. For Third Year Honours Students. First term. S. C. Russell

A study of the significant poetry and prose of Wordsworth and Coleridge, with a view toward gaining an intimate understanding of the premises of Romantic thought and the specific character of Romantic literary expression.

3 hours per week for one term.

255 English Romantic Poetry. Half Course. An Elective for Third Year Honours Students. Second term.

S. C. Russell

A study of Blake, Keats, and Shelley, with special emphasis on the development of their thought and art as expressive of the Romantic outlook.

Prerequisite: English 250.

3 hours per week for one term.

270 Nineteenth Century Literature. Full Course. For Third Year Honours Students. A. Raff

The literature of the Victorian period, with emphasis on the poets and novelists; but some attention will be given to non-fictional prose.

3 hours per week for two terms.

280 Twentieth Century British Literature. Half Course. For Fourth Year Honours Students. First term. K. Waters

3 hours per week.

285 Twentieth-Century British Literature. Half Course. An Elective for Fourth Year Honours students. K. Waters

Second term. 3 hours per week.

520 Practical Criticism. Half Course. For Second Year Honours Students. First term. A. G. Hooper

This course is designed (i) to lead students to consider how man uses language to communicate, (ii) to attempt to integrate the teaching of language and the teaching of literature, and (iii) to develop discrimination.

3 hours per week.

620 American Literature. Half Course. For Second Year Honours Students. First term. A. Newell

3 hours per week.

COURSES FOR STUDENTS MAJORING IN ENGLISH

133 Shakespeare. Full Course. For Third Year Students majoring in English. An Elective for Fourth Year Students majoring in English. A. Newell

3 hours per week for two terms.

233 The Earlier Seventeenth Century. Full Course. An Elective for Third and Fourth Year Students majoring in English. A. N. Raspa

A survey of the literature of the period bounded roughly by the years 1600 and 1660, dealing principally with the poetry of Milton and the Metaphysicals, and selections from the works of the major prose stylists.

3 hours per week for two terms.

244 Eighteenth-Century Literature. Full Course. For Fourth Year Students majoring in English. T. C. Faulkner

3 hours per week for two terms.

253 The English Romantic Period. Full Course. An Elective for Third Year Students majoring in English.

S. C. Russell

A survey of the major writers, including Wordsworth, Coleridge, Byron, Keats, Shelley, Lamb and Hazlitt. The course will deal with the development of the Romantic outlook as expressive of the changing views of man, nature and society.

3 hours per week for two terms.

273 Nineteenth-Century Literature. Full Course. An Elective for Third Year Students majoring in English. A. Raff

The poetry of Tennyson, Browning, Arnold, Hopkins, and the Pre-Raphaelite circle, and the following novels: *Jane Eyre*, *Bleak House*, *Barchester Towers*, *Middlemarch*, *Tess of The d'Urbervilles*, and *The Way of All Flesh*.

3 hours per week for two terms.

322 Drama. Half Course. For Second Year Students majoring in English. P. Davies

3 hours per week for one term.

352 The Novel. Half Course. For Second Year Students majoring in English. J. P. Nowicki

3 hours per week for one term.

362 Poetry. Half Course. For Second Year Students majoring in English K. Waters

The course attempts to understand the nature of poetry and poetic experience, and to examine the elements of a poem (broadly, language, rhythm and structural design) by practical analysis, criticism, comparison, and class discussion of a number of poems (most of them short). A central anthology, together with supplementary paperbacks of poetry and of commentary, will be used.

3 hours per week for one term.

442 Advanced Prose Composition. Half Course. For Second Year Students majoring in English. G. MacGuigan

A theoretical and practical study of prose style to make the student familiar with and competent in the use of the main prose traditions. A reading of treatises on style from Aristotle and Longinus to the present time is required.

Texts: Aristotle, *Rhetoric*. Weaver, *The Ethics of Rhetoric*. Auerbach, *Mimesis*. Whately, *Elements of Rhetoric*. Donnelly, *Persuasive Speech*. Read, *English Prose Style*. Whitehall, *Structural Elements of English*. Other selections to be announced.

3 hours per week.

Note: Among the Electives available are also 120, 280, 377, 527, 627.

COURSES FOR GENERAL ARTS STUDENTS

287 Twentieth-Century British Literature. Full Courses.

K. Waters

Among the texts studied are works by Butler, Wilde, Shaw, Yeats, Conrad, Eliot, Bennett, Lawrence, Joyce, Forster, Woolf, Huxley. Emphasizing the nature and quality of the imaginative experience of the works themselves, the course will consider also their relationship to prevailing and developing cultural theories, and associated literary movements.

3 hours per week for two terms.

289 Twentieth-Century Readings. Full Course. For Fourth Year Arts Students majoring in Biology-Chemistry, and in Psychology. A. N. Raspa

The course is designed to familiarize the student with some of the themes and forms of the modern novel, principally English, and includes discussion of some continental writers. 3 hours per week for two terms.

297 Twentieth-Century Literature, British and American. Full Course. A. T. Broes

3 hours per week for two terms.

327 Drama. Full Course. P. Davies

3 hours per week for two terms.

347 Modern Fiction. Full Course. T. C. Faulkner

3 hours per week for two terms.

357 The Novel. Full Course. L. P. Nowicki

3 hours per week for two terms.

377 Literature, Ideas and Myths. Full Course. R. S. Wareham

3 hours per week for two terms.

397 Full Course. R. K. Martin

3 hours per week for two terms.

399 For Fourth Year Arts Students majoring in Economics. R. K. Martin

3 hours per week for two terms.

527 Practical Criticism. Full Course. A. G. Hooper

This course is designed (i) to lead students to consider how man uses language to communicate, (ii) to attempt to integrate the teaching of language and the teaching of literature, and (iii) to develop discrimination. 3 hours per week for two terms.

627.01 American Literature. Full Course. S. C. Russell

A study of the development of the American tradition in literature, with emphasis on the major writers, including Emerson, Thoreau, Hawthorne, Melville, Whitman, Emily Dickinson, Mark Twain, Henry James, Fitzgerald, Hemingway, Faulkner, and T. S. Eliot.

3 hours per week for two terms.

627.02 American Literature. Full Course. A. Newell

The growth of American literature in its various forms will be surveyed in relation to regional, sociological, ideological, literary and other forces that enter into the emerging patterns of American literature and culture. The best writings from colonial times to the present will be read.

3 hours per week for two terms.

COURSES FOR COMMERCE STUDENTS

359 Twentieth-Century Fiction. Full Course. For Fourth Year Commerce Students majoring in Accounting, and Fourth Year Commerce Students majoring in Economics. A. Raff, T. C. Faulkner, A. T. Broes

British and American novels and short stories from 1890 to the present. Attention will be concentrated on the authors' varied

assessments of modern life and the methods they have developed to express their age and themselves.

Readings will include: Hardy, *Tess of the d'Urbervilles*; Lawrence, *Sons and Lovers*; Joyce, *Portrait of the Artist*; Fitzgerald, *The Great Gatsby*; Faulkner, *As I Lay Dying*; Waugh, *A Handful of Dust*; Greene, *Brighton Rock*; Cary, *The Horse's Mouth*; Malamud, *The Natural*; Snow, *The New Men*; Bellow, *Seize the Day*.

3 hours per week for two terms.

COURSES FOR SCIENCE STUDENTS

346 Modern Fiction. Full Course. For Second Year Psychology (Science) Students. T. Berns

3 hours per week for two terms.

348 Modern Fiction. Full Course. For Third Year Chemistry Students. T. Berns

3 hours per week for two terms.

349 Modern Fiction. Full Course. For Fourth Year Science Students. T. Berns, A. T. Broes,

R. K. Martin, P. Davies, L. P. Nowicki

3 hours per week for two terms.

french studies - études françaises

Arsène Lauzière Professor (Chairman)
Gustave Labbé Professor (Associate Chairman)

Paul Toupin Professor

Margaret Andersen Assistant Professor

Paule Gagnon-Leduc Assistant Professor

Gottlieb Andersen Assistant Professor

César Rouben Assistant Professor

Leonard Sugden Assistant Professor

David Lévy Assistant Professor

Martin Riegel Assistant Professor

John Mackriss Lecturer

Arthur Murphy Lecturer

Emmanuel Rioux Lecturer

Maylis Tiffou Lecturer

Marthe Catry Lecturer

Annie Maillot Lecturer

Lila Van Toch Lecturer

Catherine Verron Lecturer

Odette Rigault Lecturer

Normand Truchon Lecturer

Gilles Charpentier Lecturer

Marie-France Ligier Lecturer

Jean-Pierre Boucher Lecturer

André Berthiaume (on study leave) Lecturer

Zobeidah Youssef (on study leave) Lecturer

Alain Bartho Sessional Instructor

Gilbert Mongenot Sessional Instructor

R. Dolinsky, Supervisor and Technician Language Lab.



P R E A M B L E

A First Year course in French (on one of five levels: F-100, 120, 124, 128 or 130) is a prerequisite for any further course in French. Students who have four years of High School French and are newcomers to Loyola may not take French 100 or 120 for credit purposes. The level of these students is to be further ascertained by means of a placement test (written and oral) which is compulsory and which is to be held September 20 and 21. Newcomers will then be registered in the course level indicated by the Department.

Students with less than four years of High School French will not take the placement test unless they wish to do so. Those with one to three years of French will be directed automatically to French 120; those who have no knowledge whatsoever will be directed automatically to French 100.

There will be a full two-week control period in class during which professors will ensure that students have been assigned to their proper level. Professors may recommend a change of level (F-124, 128 and 130) before final registration becomes operative. Students will then be requested to buy *all* of their textbooks at once. Freshmen are strongly urged to buy Harrap's *Shorter French and English Dictionary* for languages courses and Quillet's *French Dictionary* for literature courses.

Students proceeding to the B.Sc. are required to take only the first year course in French. Those proceeding to the B.Com. and those proceeding to the B.A., but who do not select French as an area of concentration (major) or specialization (Honours), are required to take two French language courses, but may be permitted to take French literature instead, depending on their knowledge of the language. Finally, those proceeding to a B.A., who elect to major or to honour in French, shall take two language courses in their 3rd and 4th years, F-328 and F-428, and any of 6 (major) or 8 (honours) literature courses. However, all Arts Honour students, except French, may take a Second Year course in the Department as an elective only if this is possible.

All courses are conducted in French. There is a limit of 25 students per section in any given language course. The teaching is based more and more on the new discipline of Applied Linguistics which affords an up-to-date dynamic methodology in language teaching. The Language Laboratory is a valued auxiliary means with modern scientific teaching facilities.

Students in some 1st and 2nd year courses will attend laboratory sessions on a compulsory basis; other students may be required to attend similar sessions at the request of their professors. The Department is using more and more audio-visual means and methods (such as V.I.F. or *Voix et Images de France*). Term work is worth 60% and examinations 40% of the final mark.

The Department aims at more than sound progress in speaking and writing French fluently; it strives to create a life-like atmosphere in and out of class.

Courses leading to a B.A. with a Major in French

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102, 111, 112 or 121	Classics 112, 202, 212 or 221	FRENCH (Two Electives from 330, 340, 350 and 360)	FRENCH 428 FRENCH (Two Electives from 430, 440 and 450)
English 101	English	FRENCH 328	One Elective
FRENCH 124, 128 or 130	FRENCH 224, 228, 230-240 **	Philosophy * (see below)	* (see below)
Mathematics 101 or Science 101	250 & 260		
Two Electives	Philosophy * (see below)		
	One Elective		

(1st yr. : 6 courses; 2nd yr. : 6 courses; 3rd yr. : 5 courses; 4th yr. : 5 courses)

Courses leading to an Honours B.A. in French

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102, 111, 112 or 121	English FRENCH	FRENCH 328 FRENCH	FRENCH 428 FRENCH
English 101	(Two Electives from 228, 230, 240	(Three Electives from 330, 340, 350 & 360)	(Two Electives from 430, 440 and 450)
FRENCH 128 or 130	** , 250 & 260)	Philosophy	One Elective
Mathematics 101 or Science 101	Philosophy * (see below)		* (see below)
Two Electives	One Elective		

(1st yr. : 6 courses; 2nd yr. : 6 courses; 3rd yr. : 5 courses; 4th yr. : 5 courses)

* Two Theology courses must be taken over the four years; if Theology has been chosen as a First Year Elective, another Theology course may be taken at this time or later when possible; if Theology is not an elective at this time, students would do well to take one in line with their field of concentration.

** French 230 & French 240 are half courses which must be taken during the same year for a full credit, one per term.

100 Language : Basic French A. Bartho & G. Mongenot

An introduction to French using the method "*Voix et Images de France*". A lecture and laboratory course restricted to students with no previous knowledge of French and may not be taken for credit by students who have four years of High School French.

Three hours per week for two terms.

120 Language : Elementary French

A. Bartho & G. Mongenot

Teaching French using the method "*Voix et Images de France*" (premier degré). A lecture and laboratory course restricted to students who have less than four years of High School French.

Three hours per week for two terms.

124 Language : Fluent Normative French.

C. Rouben & Staff

Spoken and written patterns. Phonetics, structural grammar, composition and selected readings. A lecture and laboratory course for students who have completed successfully four years of High School French.

Three hours per week for two terms.

- 128 Language : Advanced French.** M. Andersen & Staff
Concentration on spoken and written patterns. Corrective phonetics, review of structural grammar, oral and written composition. Discussion on selected readings, *some explication de textes*. A lecture and part-time laboratory course for students who have a good knowledge of French.
Three hours per week for two terms.

- 130 Literature.** G. Labbé & Staff
Initiation à la littérature française : analyse d'une quinzaine de textes choisis. Genres et mouvements littéraires. Technique de l'analyse littéraire et de la dissertation. Séances de travaux pratiques. A literature survey course for freshmen who have a sound French schooling background of some ten years or its equivalent.
Three hours per week for two terms.

Textes : Hugo, *Hernani* (Classiques Larousse); Balzac, *Eugénie Grandet* (Larousse); Gide, *La Symphonie Pastorale* (Le livre de Poche Université); Camus, *L'Étranger* (L. de Poche Université); Sartre, *Huis Clos* (Livre de Poche Université); Lagarde et Michard, *XIXe Siècle et XXe Siècle*; Quillet, *Dictionnaire usuel*.

- 200 Language : Intermediate French.** A. Bartho
The second half of "Voix et Images de France" (premier degré). A lecture and laboratory course. Prerequisite : French 100.
Three hours per week for two terms.

- 220 Language.** G. Andersen & Staff
Continued emphasis on spoken French. Corrective phonetics, structural grammar in a given context, composition and selected readings. A lecture and part-time laboratory course. Prerequisite : French 120 or equivalent in Departmental test.
Three hours per week for two terms.

- 224 Language.** D. Lévy & Staff
Corrective phonetics, contextual syntax and idiomatic French. Contemporary readings illustrating French life with discussion and composition thereon. A lecture course with sessions of a practical nature.
Prerequisite : French 124 or equivalent in Departmental test.
Three hours per week for two terms.

- 228 Language and Civilization.** P. Leduc & Staff
Introduction to comparative stylistics. Vocabulary expansion by word formation and derivation, by synonymy and idiomatic structures. Oral and written composition through readings and realia of French Canadian civilization. A lecture and practice course.
Prerequisite : French 128 or equivalent in Departmental test.
Three hours per week for two terms.

- 230 Littérature : Le Moyen-Age.** M. Riegel
Oeuvres épiques, courtoises, satiriques et lyriques. Théâtre religieux et comique. Condition préalable : le cours F-130 ou la permission du directeur de département.
Leçons et séances de travaux pratiques : 3 h. par semaine pendant un trimestre. Tout étudiant qui suit ce cours doit également s'inscrire la même année au cours du second trimestre F-240.

Textes : *La Chanson de Roland, Tristan et Iseut, Le Roman de Renart, Le Miracle de Théophile, La Farce de Maître Pathelin*; Villon, *Le Grand Testament*; Lagarde et Michard, *Moyen-Age*; Quillet, *Dictionnaire usuel*.

240 Littérature : La Renaissance et le XVIe Siècle.

D. Lévy et A. Murphy
L'humanisme français. Poésie et prose : origines, évolution, oeuvres maîtresses. Condition préalable : le cours F-130 ou la permission du directeur de département. Leçons et séances de travaux pratiques : 3 h. par semaine pendant un trimestre. Tout étudiant qui s'inscrit à ce cours doit avoir suivi la même année le cours F-230.

Textes : Rabelais, *Gargantua et Pantagruel*; Montaigne, *les Essais*; du Bellay, *Regrets*; Ronsard, *les Amours*; Lagarde et Michard, *le XVIe Siècle*; Quillet, *Dictionnaire usuel*.

250 Littérature : le XVIIe Siècle ou le Classicisme français.

J. Mackriss et D. Lévy
L'esprit classique. L'honnête homme. Moralistes, auteurs dramatiques, romanciers. Condition préalable : le cours F-130 ou la permission du directeur de département.

Leçons et séances de travaux pratiques : 3 h. par semaine.
Textes : Pascal, *les Pensées*; Boileau, *l'Art poétique*; La Bruyère, *les Caractères*; La Rochefoucauld, *Maximes*; La Fontaine, *les Fables*; Bossuet, *Oraison funèbre de Condé*; La Fayette, *la Princesse de Clèves*; Corneille, *Horace*; Racine, *Andromaque*; Molière, *Don Juan*; Lagarde et Michard, *XVIIe Siècle*.

260H Littérature : le XVIIIe Siècle ou le Siècle des lumières.

C. Rouben
Règne de la raison et réveil de la sensibilité.
Condition préalable : le cours F-130 ou la permission du directeur de département.

Leçons et séances de travaux pratiques : 3 h. par semaine.
Textes : Lesage, *Gil Blas*; Marivaux, *Le Paysan Parvenu*; Prévost, *Manon Lescaut*; Montesquieu, *Lettres Persanes*; Voltaire, *Lettres Philosophiques*, *Zadig*, *Candide*; l'*Encyclopédie*; Diderot, *le Neveu de Rameau*; Rousseau, *Confessions*, *Emile*; Bernardin de Saint-Pierre, *Paul et Virginie*; Lagarde et Michard, *le XVIIIe Siècle*, Quillet, *Dictionnaire usuel*.

328 Langue : Stylistique et Création littéraire.

P. Toupin, M. Catry
Etude des procédés de style. Phonétique et diction. Travaux de création littéraire. Analyse stylistique de textes littéraires. Eléments de stylistique comparée du français et de l'anglais. Condition préalable : le cours F-228 ou la permission du directeur de département. Cours obligatoire pour tout étudiant inscrit à une concentration ou spécialisation en français (major ou honours) : 3 h. par semaine.

Textes : Courault, *l'Art d'écrire* (2 tomes); Vinay et Darbelnet, *Stylistique comparée du français et de l'anglais*; Harrap, *Shorter French and English Dictionary*; quelques autres textes au choix des professeurs.

330H Littérature : le roman français au XIX^e Siècle.

M. Andersen

Evolution et étude d'oeuvres romanesques romantiques, réalistes, naturalistes et fin de siècle. Condition préalable : un cours de littérature de deuxième année ou la permission du directeur de département.

Leçons et séances de travaux pratiques : 3 h. par semaine.

Textes : Chateaubriand, *René*; Constant, *Adolphe*; Vigny, *Servitude et grandeur militaires*; Balzac, *le Père Goriot*; Stendhal, *le Rouge et le Noir*; Flaubert, *Madame Bovary*; Zola, *Germinal*; Huysman, *A. Rebours*; Bourget, *le Disciple*; Lagarde et Michard, *XIX^e Siècle*.

340H Littérature : la poésie française au XIX^e Siècle.

A. Lauzière

Visage de l'homme à travers sa poésie. Les grandes générations et leurs oeuvres. Condition préalable : un cours de littérature de deuxième année ou la permission du directeur de département.

Leçons et séances de travaux pratiques : 3 h. par semaine.

Textes : Lamartine, *les Méditations*; Hugo, *Poésies choisies*; Vigny, *les Destinées*; Musset, *la Nuit d'Octobre*; Baudelaire, *les Fleurs du Mal*; Rimbaud, *Bateau ivre*; Verlaine, *Romances sans paroles*; Mallarmé, *l'Après-midi d'un faune*; Lagarde et Michard, *XIX^e Siècle*.

350 Littérature : l'art dramatique. P. Toupin, M. Catry et N. Truchon

Historique du théâtre. Eléments du théâtre. Diction. L'une des deux pièces qui feront l'objet principal du cours sera présentée en spectacle au terme du second trimestre de l'année universitaire. On ne s'inscrit qu'avec l'approbation du Département. Leçons, laboratoires, travaux pratiques : 3 h. par semaine.

Textes : au choix du directeur. Une pièce de Giraudoux et une pièce de Ionesco.

360H Littérature canadienne : le roman et le conte.

A. Lauzière et P. Leduc

Origines, influences, évolution. Etude d'oeuvres modernes. Condition préalable : le cours F-130 ou la permission du directeur de département.

Leçons et séances de travaux pratiques : 3 h. par semaine.

Textes : Savard, *Menaud, maître-draveur*; Ringuet, *Trente arpents*; Roy, *Bonheur d'occasion*; Lemelin, *Les Plouffe*; Giroux, *Au-delà des visages*; Langevin, *Poussière sur la Ville*; Thériault, *Agaguk*; Bessette, *Le Libraire*; Blais M.-C., *Une Saison dans la vie d'Emmanuel*; Contes choisis.

(Ce cours se donne un an sur deux : 1967-68).

365 Littérature canadienne : la poésie et le théâtre.

G. Labbé et E. Rioux

Origines, évolution, influences. Etudes d'oeuvres. Condition préalable : le cours F-130 ou la permission du directeur de département.

Leçons et séances de travaux pratiques : 3 h. par semaine.

Textes : (Collection Classiques Canadiens) : Fréchette, *Choquette*; Nelligan, *Poésies Complètes*; Desrochers, *A l'Ombre de l'Orford*; Saint-Denys Garneau, *Poésies Complètes*; Grandbois, *Rivages de l'homme*; Hébert, *Poèmes* (Seuil); Giguère, *l'Adorable Femme des Neiges*; Lapointe, *G. Ode au Saint-Laurent*; Vigneault, *Choix de Poèmes*. Théâtre : Gélinas, Toupin, Dubé, Languirand, Tougas, *Histoire de la littérature canadienne-française*; Sylvestre, *Anthologie de la poésie canadienne-française*.

(Ce cours se donne un an sur deux : 1968-69).

428 Langue : Histoire de la langue et linguistique.

M. Riegel

Histoire de la langue française. Introduction aux sciences de la linguistique. Suite à la stylistique du cours F-328. Condition préalable : le cours F-328.

Leçons et séances de travaux pratiques.

Cours obligatoire pour tout étudiant inscrit à une spécialisation en français (major ou honours) : 3 h. par semaine.

Textes : au choix du professeur.

430H Littérature : le roman français au XX^e Siècle. G. Labbé

Evolution du roman contemporain. Les grandes oeuvres.

Condition préalable : un cours de littérature de 2^e ou 3^e année ou la permission du directeur de département.

Leçons et séances de travaux pratiques : 3 h. par semaine.

Textes : Fournier, *Le Grand Meaulnes*; Gide, *La Porte étroite*; Proust, *Du Côté de chez Swann*. Le roman-fleuve. Mauriac, *Thérèse Desqueyroux*; Bernanos, *Journal d'un curé de campagne*; Green, *Moira*; Malraux, *La Condition humaine*; Camus, *l'Etranger*; Sartre, *La Nausée*. Le nouveau roman. Lagarde et Michard, *XX^e Siècle*.

440H Littérature : la poésie française au XX^e Siècle.

P. Leduc

Voies nouvelles. Langage et poésie. Approximations. Condition préalable : un cours de littérature de 2^e ou 3^e année, préférentiellement le cours F-340, ou la permission du directeur de département. Leçons et séances de travaux pratiques : 3 h. par semaine.

Textes : Valéry, *Poésies* (Gallimard); Apollinaire, *Alcools*; Breton, *Clair de terre* (Gallimard); Eluard, *Capitale de la douleur* (Gallimard); Char, *Le poème pulvérisé*; Michaux, *Plume* (Gallimard); Ponge, *Le parti-pris des choses* (Gallimard); Breton, *Les manifestes du surréalisme*; Lagarde et Michard, *XX^e Siècle*.

450H Littérature : le théâtre français à travers les siècles.

P. Toupin

L'histoire et l'analyse des grandes oeuvres de la scène française. Condition préalable : un cours de littérature de 2e ou de 3e année ou la permission du directeur de département. Leçons et séances de travaux pratiques : 3 h. par semaine.

Textes : Corneille, *Polyeucte*, Molière, *L'Ecole des Femmes*, Racine, *Britannicus*; Marivaux, *Le Jeu de l'amour et du hasard*; Beaumarchais, *Le Mariage de Figaro*; Hugo, *Ruy Blas*; Musset, *Le Chandelier*; Claudel, *L'Otage*; Montherlant, *Le Maître de Santiago*; Giraudoux, *La Guerre de Troie n'aura pas lieu*; Sartre, *Huis-Clos*; Genêt, *Haute Surveillance*; Ionesco, *La Leçon*.



LANGUAGE LABORATORY

470 Civilisation et culture : le monde français.

M. Riegel et P. Leduc

Unicité et diversité. Principales caractéristiques. Institutions et réalisations importantes : langue, esprit, moeurs, arts, politique, commerce, industries, etc. La France et le Canada. Condition préalable : la permission du directeur de département.

Cours facultatif pour tout étudiant de 3e ou de 4e année de toute faculté non inscrit au baccalauréat français spécialisé.

Leçons et séances de travaux pratiques : 3 h. par semaine.

Textes : choisis parmi les meilleures pages des lettres françaises ou étrangères. Documentation sonore et cinématographique.

geotechnical science

D. J. McDougall Associate Professor (Chairman)

A. S. Yalcin Associate Professor

(On leave of Absence)

E. H. Chown Assistant Professor

J. T. Jenkins Assistant Professor

M. MacFarlane Sessional Lecturer

Courses leading to a B.Sc. with a Major in Geotechnical Science

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101	Chemistry 211	Chemistry 231	Engineering 803
Chemistry 102	Chemistry 212	Engineering 802	English
French	GEOTECH.Sc. 201*	GEOTECH.Sc. 305	GEOTECH.Sc. 402
Mathematics 120	GEOTECH.Sc. 302	GEOTECH.Sc. 307	GEOTECH.Sc. 405
Mathematics 131	GEOTECH.Sc. 303	GEOTECH.Sc. 401	GEOTECH.Sc. 406
Physics 101	GEOTECH.Sc. 304**	GEOTECH.Sc. 403**	GEOTECH.Sc. 407
Theology	GEOTECH.Sc. 306	GEOTECH.Sc. 404	GEOTECH.Sc. 408
*One Elective (in second term)	GEOTECH.Sc. 310	GEOTECH.Sc. 409	GEOTECH.Sc. 410
from :	Mathematics 121	Philosophy	Philosophy or
Biology 101	Philosophy	Physics 205	Theology
GEOTECH.Sc. 202	Theology		
Mathematics 121			

* Those students wishing to continue in Geotech. Sc. should choose Geot. Sc. 202 as their First Year Elective; they must also take Geotech. Sc. 201 in May immediately following the Freshman final examinations.

** This course may be taken in a later year.

Courses of the General Science Programme in Geotechnical Science leading to a B.Sc.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101	Chemistry 231	Chemistry 211	English
Chemistry 102	GEOTECH.Sc. 201	GEOTECH.Sc. 305	GEOTECH.Sc. 406
French	GEOTECH.Sc. 302	GEOTECH.Sc. 404	and
Mathematics 120	Philosophy	GEOTECH.Sc. 405	either (a), (b),
Mathematics 131	Theology	Philosophy	or (c)
Physics 101		**One Elective	(a)GEOTECH.Sc. 402
Theology		from:	GEOTECH.Sc. 407
*One Elective (in second term)		Chemistry 212	(b)GEOTECH.Sc. 310
from:		General Zoology	GEOTECH.Sc. 401
Biology 101		Physics 205	GEOTECH.Sc. 409
GEOTECH.Sc. 202			(c)GEOTECH.Sc. 303
Mathematics 121			GEOTECH.Sc. 410
			Computer Sc.
			Philosophy or
			Theology

* Those students wishing to continue in Geotech. Sc. should choose Geotech. Sc. 202 as their First Year Elective.

**Another course may be substituted with the approval of the department.

201 Introduction to Geologic Mapping. Half Course. Staff

Students are introduced to the use of transits, levels, compass, air photos, etc. Some elementary concepts of map making and descriptive Geometry are studied, and simple outcrop maps are constructed from notes obtained in the field. This is a second year course which is normally taken in the spring at the end of the first year.

Two week field school in May.

202 General Geology. Half Course. D. J. McDougall

Elements of mineralogy, petrology, soil mechanics, structural geology, historical geology and geomorphology. Mineral, rock and soil specimens, topographic and geologic maps, and air photos are studied in the laboratory. Several field trips are made to points of interest in and near Montreal.

Lectures : 3 hours per week for second term.

Lab. : 3 hours per week for second term.

300 Geology for Engineers. Full Course.
Not given in 1967-68.

The first term consists of a study of general Geology (202) and the second term covers a more detailed examination of Engineering Geology (402).

Lectures : 3 hours per week for first term.

Lectures : 2 hours per week for second term.

Laboratory : 3 hours per week for first term.

Laboratory : 2 hours per week for second term.

302 Determinative Mineralogy. Full Course. J. T. Jenkins

The identification of minerals by physical and chemical means. The first part of the course is an introduction to crystallography, in which a brief description of some of the mineralogically important crystal classes is stressed. This is followed by a review of the chemical and physical properties of minerals, and a

systematic description of some 150 minerals. In the laboratory, techniques for identification of these minerals are learned. If time permits, an introduction to the theory and practice of X-ray crystallography is offered.

Lectures : 2 hours per week for two terms.

Laboratory : 3 hours per week for two terms.

Text : Kraus, Hunt, and Ramsdell, *Mineralogy*, McGraw-Hill.

303 Applied Geophysics. Half Course.

An introduction to geophysical methods of prospecting and of investigating subsurface structures. The theories, uses and limitations of various magnetic, electrical, gravitational and seismic methods are explained and compared. The practical operation of the instruments is reviewed and actual field results are obtained and analysed.

Prerequisite : Geotechnical Science 202.

Lectures : 2 hours per week for one term.

Texts : Dobrin, *Introduction to Geophysical Prospecting*, McGraw-Hill.

304 Field Geophysics. Half Course.

Field work involving small scale seismic, magnetic, gravimetric and electrical surveys.

Prerequisite : Geotechnical Science 303.

Field Work : 2 weeks in May at the Loyola Geophysics Field School.

305 Structural Geology. Full Course. E. H. Chown

Examination of geological structures and their origin. Methods of structural interpretation. Laboratory survey of graphical methods and exercises illustrating the analysis of practical problems.

Prerequisite : Geotechnical Science 202, 306.

Lectures : 2 hours per week for two terms.

Laboratory : 3 hours per week for two terms.

Text : Hills, *Elements of Structural Geology*. Wiley.

306 Geotechnical Methods. Half Course. E. H. Chown

A survey of field and laboratory methods and techniques designed as a continuation of Introductory Geology and as an introduction to the philosophy and practice of geotechnical investigations.

Lectures : 2 hours per week for one term.

Laboratory : 2 hours per week for one term.

Text : White, *Study of the Earth*. Prentice-Hall.

307 Meteorology. Half Course. M. MacFarlane

Elements of physical and dynamic Meteorology.

Applied Meteorology with special emphasis on air pollution and weather modification. Brief survey of the current status of palaeoclimatology.

Lectures : 2 hours per week for one term.

Lab. : 2 hours per week for one term.

Text : Petterssen *Introduction to Meteorology*, 2nd edition, McGraw-Hill.

310 Paleontology. Half Course. Not given in 1967-68.

A systematic survey of invertebrate fossil forms and their distribution in space and time. The applications of paleontology to stratigraphy.

Lectures : 2 hours per week for one term.

Laboratory : 3 hours per week for one term.

401 Geomorphology. Half Course. D. J. McDougall

An advanced course in the study of landforms produced by the process of erosion and deposition by water, wind, glaciation and earth movements. The interrelationship of geologic processes, materials and structures, soil types, climatic conditions, etc., in the development of topographic forms is emphasized. Suites of maps and air photos plus one full day field trip are used to illustrate the lectures.

Prerequisite: Geology 202 or 300.

Lectures: 2 hours per week for one term.

Lab.: 2 hours per week for one term.

Text: Thornbury, *Principles of Geomorphology*. Wiley.

402 Engineering Geology. Half Course. D. J. McDougall

Engineering properties of rocks. Ground water. The formation and mechanics of soils including structure, gradation, sedimentation, permeability, compressibility and shearing strength. Application of soil characteristics to typical geotechnical problems in bearing capacity, settlement and lateral earth pressure. Crustal movements and stability of slopes. Frost action in regolith. Laboratory work for experimental determination of above characteristics.

Prerequisite: Geotechnical Science 202.

Lectures: 2 hours per week for one term.

Lab.: 2 hours per week for one term.

Text: Krynine and Judd, *Principles of Engineering Geology and Geotechnics*. McGraw-Hill.

403 Field Geology. Half Course.

Surface and underground field mapping methods. Preparation of geological maps, sections and reports from field notes, diagrams, air photos, etc.

Prerequisite: Geotechnical Science 202, 305, 406.

Field Work: 2 weeks in May at the McGill Field Geology School.

404 Optical Crystallography. Half Course. J. T. Jenkins

Lectures deal with the theoretical background necessary for the use of the petrographic microscope. In the laboratory, oil immersion techniques for the determination of isotropic and anisotropic minerals in powder form are studied. If time permits, an introduction to the use of the four-axis Universal Stage is given.

Prerequisite: Geotechnical Science 302.

Lectures: 2 hours per week for one term.

Laboratory: 3 hours per week for one term.

Texts: Wahlstrom, *Optical Crystallography*, 3rd. ed., Wiley. U.S.G.S. Bull. 848, *The Microscopic Determination of the Nonopaque Minerals*, 2nd. ed.

405 Geology and Mineral Resources of Canada. Half Course. E. H. Chown

Description of the geology of the major geomorphic subdivisions of Canada and the evaluation of the mineral resources of each. Reading assignments and colloquium are used to probe into specific problems.

Lectures: 2 hours per week for one term.

Colloquium: 1-3 hours per week for one term.

Text: *Geology and Economic Minerals of Canada* 4th ed. Econ. Geol. Series no. 1 of the Geological Survey of Canada.

406 Igneous and Metamorphic Petrology. Full Course.

J. T. Jenkins

The first part of the course deals with the chemistry, mineralogy, fabrics, classifications, and petrogenesis of the igneous rocks. This is followed by an examination of the scope of metamorphism and the relationships amongst metamorphism, magma, and orogeny. In the laboratory, a large number of igneous and metamorphic rocks are examined and described, employing megascopic and microscopic techniques.

Prerequisites: Geotechnical Science 302, 404.

Lectures: 2 hours per week for two terms.

Lab.: 3 hours per week for two terms.

Texts: Huang, *Petrology*. McGraw-Hill. Moorhouse, *The Study of Rocks in Thin Section*. Harper.

407 Economic Mineral Deposits. Full Course.

D. J. McDougall

The origins, types of occurrence and classification of deposits of important metallic and non-metallic minerals of economic importance.

Prerequisite: Geotechnical Science 305, 406.

Lectures: 2 hours per week for two terms.

Lab.: 3 hours per week for two terms.

408 Geotechnical Laboratory. Full Course.

Staff

409 Sedimentary Petrology. Half Course. E. H. Chown

The formation, occurrence and classification of sedimentary rocks. Laboratory includes a brief survey of techniques applied to unconsolidated sediments, but particular emphasis is placed on the microscopic examination of sedimentary rocks.

Prerequisite: Geotechnical Science 404.

Lectures: 2 hours per week for one term.

Laboratory: 3 hours per week for one term.

Text: Pettijohn, *Sedimentary Rocks* — 2nd ed. Harper.

410 Geochemistry. Half Course.

D. J. McDougall

The geochemistry of the lithosphere, hydrosphere, atmosphere. Emphasis is placed on economic applications. In the laboratory, various techniques of investigating trace element distribution are examined.

Lectures: 2 hours per week for one term.

Laboratory: 3 hours per week for one term.

Text: Hawkes and Webb, *Geochemical Prospecting*. Harper and references.

In the Fourth year qualified students may be permitted to take up to two additional full courses in Chemistry, Engineering, Mathematics or Physics.

A course of scientific German is recommended for those contemplating graduate studies. It is strongly recommended that prior to graduation at least one summer be spent in some phase of Geotechnical investigation.

history



F. G. W. Adams Associate Professor (Chairman)
 Rev. C. B. O'Keefe, S.J. Associate Professor
 D. C. Savage Associate Professor
 R. E. Ruigh Associate Professor (on leave)
 R. T. Coolidge Assistant Professor
 J. T. Copp Assistant Professor
 D. J. O'Brien Assistant Professor
 C. Schlacks, Jr., Assistant Professor
 W. Hubbard Lecturer
 Mrs. A. Levesque-Stein Lecturer
 Rev. J. Monet, S.J. Sessional Lecturer (on leave)

Courses leading to an Honours B.A. in History.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 HISTORY or 112 or 121 English 101 French Mathematics 101 or Science 101 Two Electives	(Three Electives from General Courses) Philosophy Theology	HONOURS HISTORY TUTORIAL HISTORY (Two Electives from Honours Courses) Philosophy One Elective	HONOURS HISTORY TUTORIAL HISTORY (Two Electives from Honours Courses) Theology One Elective

Of the four honours history courses in the third and fourth year, one may be in the same field as the tutorial course, two must be in other fields, and one may be in another department at the discretion of the student's tutorial advisor. Students in the honours history programme will be assigned a faculty advisor, who will normally be the director of their honours history tutorial and with whom they must consult concerning their selection of courses.

Students are required to take two theology courses. If this requirement is completed in the first and second years, students may substitute a second elective in fourth year.

There is a comprehensive oral examination for all honours history students towards the end of their fourth year.

Courses leading to a B.A. with a Major in History.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 or 112 or 121 English 101 French Mathematics 101 or Science 101 Two Electives	Classics 112 or 202 or 212 or 221 French HISTORY (Two Electives from General Courses) Philosophy Theology	202 English HISTORY (Two Electives from General or Honours Courses) Philosophy One Elective	HISTORY (Two Electives from General or Honours Courses) Theology Two Electives

- ✓ 101 **The History of Ideas in the Modern World (since 1600).** F. G. W. Adams & D. C. Savage
 Lectures & Seminars: 3 hours per week for two terms.

GENERAL COURSES

The following courses are open to students of any faculty in the second, third or fourth year. History 101 is recommended as a prerequisite but is not required.

- 201 **History of Canada. Full Course.** J. T. Copp
 Lectures: 3 hours per week for two terms.
- 202 **History of the United States. Full Course.** D. J. O'Brien
 Lectures: 3 hours per week for two terms.
- 203 **History of Modern Europe, 1760-1919. Full Course.**
 Lectures: 3 hours per week for two terms. W. Hubbard
- 204 **The World since 1914. Full Course.** F. G. W. Adams
 Lectures: 3 hours per week for two terms.
- 205 **History of Mediaeval Europe. Full Course.**
 Lectures: 3 hours per week for two terms. R. T. Coolidge
- 206 **Renaissance and Reformation. Full Course.**
 Lectures: 3 hours per week for two terms.
- 207 **History of England. Full Course.**
 Lectures: 3 hours per week for two terms.
- 208 **History of Russia. Full Course.** C. Schlacks
 Lectures: 3 hours per week for two terms.
- 209 **Introduction to the History of Africa. Full Course.**
 D. C. Savage & D. Porter
 Lectures: 3 hours per week for two terms.
- 210 **The Middle East (offered 1968-69). Full Course.**
 Lectures: 3 hours per week for two terms. H. Habib
- 211 **History of Latin America (offered 1968-69). Full Course.**
 Lectures: 3 hours per week for two terms.
- 212 **English Constitutional History (offered 1968-69). Full Course.** R. E. Ruigh
 Lectures: 3 hours per week for two terms.
- 213 **Modern Catholic Social and Political Thought. Full Course.** D. J. O'Brien
 Lectures: 3 hours per week for two terms.
- 214 **History of Germany since 1815. Full Course.**
 Lectures: 3 hours per week for two terms. W. Hubbard
- 215 **Diplomatic History, 1648 to the present. Full Course. (offered 1968-69)** W. Hubbard
 Lectures: 3 hours per week for two terms.

- 216 History of Ancient Greece and Rome (also listed as Classics 330). Full Course.** D. Brown
Lectures : 3 hours per week for two terms.

HONOURS COURSES

The following courses are open to honours students in all departments in the second, third and fourth years. Students in the third and fourth year majoring in history or in other departments may take these courses with the permission of the lecturer. Normally majors will be allowed to take these courses only if they have successfully completed the prerequisite general course.

- 300 Britain and Ireland in the Victorian Age. Full Course.** D. C. Savage
Seminar : 2 hours per week for two terms.
- 301 Post-Confederation Canada. Full Course.** J. T. Copp
A. Levesque-Stein
Seminar : 2 hours per week for two terms.
- 302 The United States : Politics and Foreign Policy, 1890-1914. (offered 1968-69). Full Course.**
Seminar : 2 hours per week for two terms. D. J. O'Brien
- 303 Church and State in the Middle Ages. Full Course.**
Seminar : 2 hours per week for two terms. R. T. Coolidge
- 304 The Idea of Nationalism, with special reference to Africa. Full Course.** D. C. Savage
Seminar : 2 hours per week for two terms.
- 305 The Era of the Governing Class : English History, 1660-1815 (not offered 1967-68). Full Course.**
Seminar : 2 hours per week for two terms. R. E. Ruigh
- 306 Intellectual History of Russia 1881-1914. Full Course. (offered 1968-69).** C. Schlacks
Seminar : 2 hours per week for two terms.
- 307 The French Revolution and Napoleon. Full Course. (offered 1968-69).** F. G. W. Adams
Seminar : 2 hours per week for two terms.
- 308 Man in Contemporary Society : A Reading and Discussion of the Problems of Man in the 20th Century. Full Course.** Staff
Seminar : 2 hours per week for two terms.
- 309 Philosophy of History. Full Course.** E. Milne
Seminar : 2 hours per week for two terms.

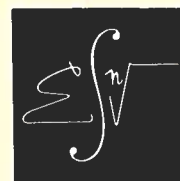
- 310 The Age of the Enlightenment. Full Course.** F. G. W. Adams and C. B. O'Keefe, S.J.
Seminar : 2 hours per week for two terms.
- 311 Tudor-Stuart England. Full Course.**
Seminar : 2 hours per week for two terms.
- 312 American Intellectual History. Full Course.**
Seminar : 2 hours per week for two terms. D. J. O'Brien
- 313 The Russian Revolutions of 1905 and 1917. Full Course.** C. Schlacks
Seminar : 2 hours per week for two terms.
- 314 Histoire de la Province de Québec. Full Course.** A. Lévesque-Stein, J. T. Copp
Seminar : 2 hours per week for two terms.
- 315 Problems in Central European History, 1848-1939.** W. Hubbard

HONOURS HISTORY TUTORIAL

The history tutorial programme is open to honours students in history only. All honours students in history must select an area of concentration from the list below at the end of second year. At the end of third year they must choose, in consultation with their tutorial directors, a research topic or other specialized work for intensive analysis during the fourth year. The history department will also accommodate those honours history students who desire to pursue an interdisciplinary or thematic interest in their third and fourth year. The tutorial course will be the equivalent of two full courses, and examinations will be given at the end of the third and fourth years. The tutorial directors may, at their discretion, assign summer reading as part of the course work.

1. North American History
2. British History
3. European History 400-1600
4. European History 1600 to the present
5. Africa

mathematics



- A. J. Prillo Associate Professor (Chairman)
Rev. E. O'Connor, S.J. Professor
I. Benjamin Associate Professor
I. Shtern Associate Professor
M. Faierman Assistant Professor
K. N. Majumdar Assistant Professor
R. C. Moore Assistant Professor
J. Soric Assistant Professor
T. Srivastava Assistant Professor
G. Bashconji Lecturer
H. Fainsilber Lecturer
G. Faygel Lecturer
C. G. Hewson Lecturer
Rev. J. G. McDonough, S.J. Lecturer
J. B. Sabat Lecturer
E. Storr Lecturer

Courses leading to an Honours B.Sc. in Mathematics			
FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101, 102	MATHEMATICS 220	MATHEMATICS 320	English
French	MATHEMATICS 234	MATHEMATICS 330	MATHEMATICS 430
MATHEMATICS 120	MATHEMATICS 318	MATHEMATICS 420	MATHEMATICS 440
MATHEMATICS 131	Philosophy	Philosophy	MATHEMATICS 480
Physics 101	Physics 205	Physics 311	Philosophy or
Theology	Theology		Theology
*One Elective (in second term) from: Biology 101 Geot. Sc. 202 MATH. 121			

* Those students who wish to continue in the Honours Mathematics programme must choose Mathematics 121 as their First Year Elective.

Courses leading to a B.Sc. with a Major in Mathematics			
FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101, 102	MATHEMATICS 201	MATHEMATICS 324	English
French	MATHEMATICS 205	MATHEMATICS 318	MATHEMATICS 330
MATHEMATICS 120	MATHEMATICS 221	MATHEMATICS 320	MATHEMATICS 420
MATHEMATICS 131	Philosophy	Philosophy	MATHEMATICS 440
Physics 101	Physics 205	Physics 311	MATHEMATICS 480
Theology	Theology		Philosophy
One Elective (in second term) from: Biology 101 Geot. Sc. 202 MATH. 121			

Courses leading to a General B.Sc. in Mathematics			
FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101, 102	MATHEMATICS 221	English	MATHEMATICS 320
MATHEMATICS 120	MATHEMATICS 232	MATHEMATICS 201	MATHEMATICS 331
MATHEMATICS 131	Philosophy	MATHEMATICS 234	Philosophy or
French	Theology	MATHEMATICS 240	Theology
Physics 101	One Elective	Philosophy	One Elective
Theology			
One Elective (in second term) from: Biology 101 Geot. Sc. 202 MATH. 121			

101 Algebra and Trigonometry. Full Course.

Algebra and Graphs: linear and quadratic functions and their graphs; ratio and proportion; the progressions; permutations and combinations; binomial theorem; mathematics of investment.

Plane Trigonometry and Analytic Geometry; the trigonometric functions and solution of right-angled triangles, measurements of angles; identical relationships among the functions; trigonometric equations; graphs of the trigonometric functions; solution of triangles; logarithms; discussion of straight line and circle.

Lectures: 3 hours per week for two terms.

110 Analytic Geometry and Calculus. Full Course.

Rectangular co-ordinate system, graphs, equations of straight line, circle, conic sections. Limits, continuous functions. The derivative, differentiation of Algebraic functions; applications of the derivative. Antiderivatives. The definite integral. Applications of integration. Transformations of Axes. Families of curves. Differentiation and integration of trigonometric, logarithmic and exponential functions. Introduction to methods of integration.

Lectures: 3 hours per week for two terms (Engineering).

Text: *Analytic Geometry and the Calculus* by Goodman (Mac-Millan).

120 Algebra and Trigonometry. Half Course.

Numbers, Sets and Functions. Equations, Inequalities, Logarithms. Trigonometric Functions. Mathematical Induction, Binomial Theorem and Sequences. Systems of Linear Relations. Trigonometric Analysis. Theory of Equations. The complex number system. Matrices and Determinants.

Lectures: 3 hours per week in first term.

Text: *Algebra & Trigonometry* (Revised Edition) by E. A. Cameron (Holt, Rinehart & Winston, 1965).

121 Solid Vector Geometry. Half Course.

Introduction to three-dimensional Geometry. Introduction to Vector Spaces: Addition, subtraction and multiplication of vectors, matrices. Linear dependence and independence of vectors; simple applications. Length and inner product, applications of scalar product to Geometry. Vector product. Triple product. Surfaces. Other coordinate systems in 3-space: polar, cylindrical and spherical coordinates. Linear transformations.

Lectures: 3 hours per week in second term.

Text: *Algebra & Vector Geometry* by R. G. Stanton & K. D. Fryer (Holt, Rinehart & Winston, 1965).

131 Analytic Geometry and Calculus. Full Course.

Algebraic Equations. Rectangular co-ordinate system. Graphs. Solution of equations by graphs. Equations of straight line, circle, and conics. Inequalities. Mathematical induction. Limits. Continuous functions. The derivative. Differentiation of algebraic functions. Applications of the derivative. Antiderivatives. The definite integral. Applications of integration. Transformation of axes. Families of curves. Trigonometric, logarithmic, and exponential functions.

Lectures: 3 hours per week for two terms.

Text: *Analytic Geometry and Calculus* by Goodman (Mac-Millan).

201 Probability and Statistics. Full Course.

Frequency Distributions, Probability, Binomial, Normal and Poisson Laws, Sampling Theory, Curve Fitting, Distribution of Chi-Squares, F and T, Hypothesis Testing, Quality control, Regression Theory, Analysis of Variance, Introduction to Experimental Design.

Lectures: 3 hours per week for two terms.

Text: *Elementary Statistics* by P. G. Hoel (Wiley).

202 Elementary Statistics. Half Course.

Empirical frequency Distributions and Descriptive Measures; Elementary Probability; Populations, samples and Theoretical Distributions; Sampling Distributions; Estimation of Confidence Intervals; Tests of Hypotheses; two sample techniques; tests for goodness of fit; Regression and Correlation; Analysis of Variance.

Lectures: 3 hours per week for one term.

Text: *Elements of Statistical Inference* by D. V. Huntsberger (2nd edition) Allyn & Bacon, 1967.

203 Theory of Interest. Half Course.

Simple and compound interest; discounts, annuities certain; sinking funds; bonds; elementary interpolation.

Lectures: 3 hours per week for one term. (Commerce).

Text: Simpson, Pirenian and Crenshaw *Mathematics of Finance* (Prentice-Hall).

205 Calculus. Full Course.

A first course aiming to cover as completely as possible the ordinary techniques and applications of calculus.

Limits of functions, differentiation and integration of polynomials with applications; second derivative and differentiation of algebraic, exponential and logarithmic functions; curvature; definite integral.

Differentiation and integration of trigonometric functions; methods of integration; improper integrals; applications of the definite integrals; approximate integrals; partial derivatives; multiple integrals; expansion of functions.

Lectures: 3 hours per week for two terms.

Text: Middlemiss, *Differential and Integral Calculus*.

210 Analytic Geometry and Calculus. Full Course.

A continuation of Math. 110.

Methods of integration. Indeterminate forms and improper integrals. Two and three dimensional vector geometry. Polar, cylindrical and spherical co-ordinates. Functions of more than one variable. Partial differentiation. Multiple integrals. Introduction to elementary differential equations.

Lectures: 3 hours per week for two terms. (Engineering).

Text: *Analytic Geometry and the Calculus* by Goodman (MacMillan).

212 Algebra. Full Course.

Inequalities, complex numbers, theory of equations, Determinants and matrices; convergence and divergence of series, Taylor and MacLaurin series; Introduction to statistics.

Lectures: 2 hours per week for two terms. (Engineering).

Text: To be announced.

220 Algebra. Full Course.

The first part of this course aims at an accurate working familiarity with the following topics: real numbers; decimal approximations; abbreviated methods of computation; inequalities; complex numbers; formal and functional properties of polynomials; polynomial equations; rational functions.

The second part embraces the following topics: solution of cubic and quartic equations by radicals; systems of linear equations; determinants; matrices; linear transformations (projecture and complex); symmetric functions of the roots of an equation; approximation of irrational numbers by rationals; impossibility of angle trisection by ruler and compass; sequences; limits; summation of series.

Lectures: 3 hours per week for two terms. (Honours Science only).

Reference: Courant and Robbins, *What is Mathematics?* (Oxford).

221 Algebra. Full Course.

The integers; the rational and real number systems; infinite sequences and series; the Cauchy convergence criteria; inequalities; introduction to complex numbers; some elementary functions of complex variable; exponential, sine and cosine functions, Euler identity, extraction of roots, logarithmic function; polynomials and polynomial equations and their graphs; fundamental theorem of algebra; roots of polynomial equations; determinants and their applications; matrices: multiplication of matrices, inverse of a matrix, matrix solution of system of equations; vector analysis.

Lectures: 3 hours per week for two terms.

Text: *Algebra & Vector Geometry* by R. G. Stanton & K. D. Fryer. (Holt, Rinehart & Winston, 1965).

231 Advanced Calculus. Full Course.

Indeterminate forms and Improper Integrals. Infinite Series. Taylor's and McLaurin's Series. Fourier Series. Functions of more than one Variable. Continuity. Partial Differentiation. Vector Calculus. Multiple Integrals. Line and Surface Integrals. Introduction to Complex Variables.

Lectures: 3 hours per week for two terms.

Text: To be announced.

232 Analytical Geometry and Calculus. Full Course.

A continuation of Math. 131.

Methods of Integration. Indeterminate forms and Improper Integrals. 2 and 3-dimensional Vector Geometry. Polar Co-ordinates. Functions of more than one variable. Partial Differentiation, Multiple Integrals.

Lectures: 3 hours per week for two terms.

Text: To be announced.

233 Algebra and Calculus. Full Course.

An introductory course aiming to cover the ordinary techniques and applications of calculus. The course will include topics in Algebra and elementary differential equations.

Lectures: 3 hours per week for two terms.

Text: To be announced.

234 Differential Equations. Full Course.

Equations of first order and first degree; first-order equations of degree higher than the first; singular solutions; linear equations with constant coefficients; solving of equations by Laplace Transforms; equations of order higher than the first; Existence Theorems and applications; solution by series; partial differential equations; Lagrange's linear equation; Charpit's and Jacobi's method for solving non-linear equations of first order; linear partial differential equations with constant coefficients of second and higher order, method of separation of variables, applications.

Lectures: 3 hours per week for two terms.

References: Kells, *Elementary Differential Equations*; Piaggio, *Differential Equations*; Miller, *Partial Differential Equations*.

240 Numerical Methods. Full Course.

A first course in numerical methods with aid of desk calculators and IBM 1620.

Elementary finite Differences. Solution of equations. Computation with series and integrals. Linear systems and metric methods. Difference equations and relaxation methods. Numerical solutions of differential equations. Principles of automatic computation; methods of Computer programming.

Lectures: 3 hours per week for two terms.

Text: *Numerical Methods for Science & Engineering* by R. G. Stanton.

312 Ordinary Differential Equations. Full Course.

Equations of first order and first degree; first order equations of degree higher than the first, singular solutions; linear equations with constant coefficients; solving of equations by Laplace Transforms; Equations of order higher than the first; Existence Theorems and applications; solution by series; numerical solutions.

Lectures: 2 hours per week for two terms.

Text: *Differential Equations* by S. Ross (Blaisdell).

313 Engineering Mathematics. Full Course.

Introduction to vectors; Lagrange's Partial Differential equation; Solution by separation of variables; Laplace equation; Bessel functions; Legendre functions.

Roots of complex numbers; branch points and cuts; Cauchy-Riemann differential equations; Cauchy's Theorem, Cauchy inequality; Liouville's Theorem; Cauchy integral formula; Taylor's and Laurent's Theorems; residues, Cauchy residue theorem; simple problems on contour integration; conformal mapping and Fourier series.

Lectures: 2 hours per week for two terms.

References: Kells, *Elementary differential equations*; Churchill, *Introduction to complex variable & applications*; Sokolnikoff, *Higher Mathematics for Engineers and Physicists*.

318 Advanced Calculus. Full Course.

Continuity of a function of two variables; partial differentiation; multiple and line integrals; infinite series; Fourier series; improper integrals, Gamma and Beta functions.

Complex variables: De Moivre's Theorem; roots of complex numbers; branch points and cuts, complex differentiation and Cauchy-Riemann differential equations, complex line integrals, Cauchy's theorem, Morera's theorem, Cauchy's inequality, Liouville's Theorem, Cauchy's integral formula, Taylor's and Laurent's theorems; residues, Cauchy's residue theorem, Problems on contour integration, conformal mapping.

Lectures: 3 hours per week for two terms.

References: Kaplan, *Advanced Calculus*; Sokolnikoff, *Higher Mathematics of Engineers & Physicists*; Churchill, *Introduction to complex variable & applications*.

320 Linear Algebra. Full Course.

Vector spaces; linear transformations; matrices; linear equations and determinants; equivalence relations on matrices; a canonical form for similarity; metric concepts.

Lectures: 3 hours per week for two terms.

Text: *Introduction to Matrices and Linear Transformations* by D. Finkbeiner.

330 Real Analysis. Full Course.

This course is an introduction to rigorous mathematical analysis. It thoroughly covers elementary set theory, theory of sequences, series, tests of convergence, inequalities, real variable theory and Riemann's integration theory.

Lectures: 3 hours per week for two terms.

References: *Theory and application of infinite series* by K. Knopp; *Mathematical Analysis* by Tom M. Apostol; *Mathematical Analysis* by T. M. Flett (McGraw-Hill Co.)

331 Advanced Calculus. Full Course.

Continuity of a function of two variables; partial differentiation; multiple and line integrals; infinite series; Fourier series; improper integrals; Gamma and Beta functions; complex variables.

Lectures: 3 hours per week for two terms.

References: *Advanced Calculus* by Taylor (Blaisdell).

Elements of Complex Variables by Pennisi (Holt, Rinehart & Winston).

332 Advanced Calculus. Full Course.

Limits and continuity of a function of two variables; partial differentiation; multiple and line integrals; infinite series; Fourier series; improper integrals and Gamma functions. Differential equations.

Lectures: 2 hours per week for two terms.

Text: Sokolnikoff, *Higher Mathematics for Engineers and Physicists* (McGraw-Hill).

420 Modern Algebra. Full Course.

This course is an introduction to modern abstract algebra. It includes group theory, rings and their properties, division rings, quaternions, fields, mappings of algebraic systems, rudiments of Galois theory of equations and Galois fields.

Lectures: 3 hours per week for two terms.

References: *A survey of Modern Algebra* by Birkhoff and MacLane; *Topics in Algebra* by I. N. Herstein.

430 Real and Complex Analysis. Full Course.

A continuation of Mathematics 330. Functions of a Real Variable; Functions of a Complex Variable.

Lectures: 3 hours per week for two terms.

Texts: *The Theory of Function* by Titchmarsh (Oxford); *Theory of Functions Part II* by K. Knopp (Dover).

440 Advanced Numerical Methods. Full Course.

A continuation of Mathematics 240.

Finite Differences: ordinary, divided, and central differences.

Inverse interpolation and solution of equations: graphic method, real and complex roots by iterative procedure, regula falsi, and Newton's method. *Computation with series and integrals*: error bounds in series computation, evaluation of

integrals by finite difference methods, Simpson's Rule, Euler-MacLaurin series, asymptotic expansions, Lagrange series.

Numerical solutions of differential equations: solution in series, Pickard method, solution by repeated Taylor series, Adams-Bashforth process, Milne method, Runge-Kutta method.

Linear systems and matrix methods: Eigenvalue problems, iterative determination of eigenvalues. *Solution of linear equations*: method of exact elimination, triangular elimination, relaxation, iterative methods, ill-conditioned equations. *Difference equations*: Integration and summation, differential and difference equations, numerical solution of difference equations, solution of difference equations by relaxation. *Solution of differential equations by difference equation methods*: relation between derivatives and differences, transformation of differential equations into difference equations, solution of partial differential equations by difference equations. Monte Carlo Techniques.

Lectures: 3 hours per week for two terms.

Text: *Numerical Methods for Science and Engineering* by R. G. Stanton (Prentice-Hall).

Ref.: *Numerical Analysis for Computers* by J. A. Lee (Reinhod, 1966).

460 Introduction to Topology. Full Course.

Topological spaces. Cartesian products, continuous mappings, separation axioms, connectedness, compact and locally compact spaces, metrizability.

Lectures: 3 hours per week for two terms.

References: *Introduction to Topology and Modern Analysis* by G. Simmons.

470 Differential Geometry. Full Course.

Curves in space. Gaussian curvature. Tensorial Notation. Introduction to Differentiable Manifolds.

Lectures: 3 hours per week for two terms.

References: *Differential Geometry* by Struik (Addison-Wesley, 1961); *Elementary Differential Geometry* by B. O'Neil (Academic Press 1966).

480 Number Theory. Full Course.

This course covers the standard classical results of Fermat, Euler, Gauss and other relating to arithmetical functions, theory of congruences, detailed study of quadratic congruences, some additive number theory Bertrand "postulate", elementary distribution theory of primes.

Lectures: 3 hours per week for two terms.

References: *An Introduction to the Theory of Numbers* by G. H. Hardy and E. W. Wright; *Topics in Number Theory*, Vols. I and II by W. J. Le Veque.

490 History of Mathematics. Half Course.

The development of Mathematics from ancient to modern times, including study of prominent mathematicians and their works. Problems will be worked using both modern and historical approaches.

Lectures: 1 hour per week for two terms.

Text: *An Introduction to the History of Mathematics* by H. Eves (Rev. ed.).

modern languages

A. E. Lauzière Professor (Chairman)
U. Sautter Assistant Professor
E. Ottolenghi Assistant Professor
J. Costa Lecturer
D. Williamson Part-time Lecturer
R. Dolinsky, Supervisor & Technician
Language Laboratory

PREAMBLE

The Department of MODERN LANGUAGES offers presently instruction in Spanish, German and Italian. Students may take a Major in either Spanish or German. Non-majoring students in the latter two languages may register for courses in Spanish, German or Italian when an elective is possible. However, no fourth-year student may select a first-year course in any of these languages. If a third-year student registers in one of Spanish-100, German-100 or Italian-100, he must assure himself about taking Spanish-200, German-200 or Italian-200 in his fourth year.

The Department offers also a Major, or more rightly a double Major, in MODERN LANGUAGES. A sound knowledge of both English and French is a prerequisite. After Departmental approval, a student will choose to major in two of the following three languages: Spanish, German and Italian. The chosen languages will be known as MODERN Languages (1) and MODERN LANGUAGE (2): see the chart leading to a B.A. with double Majors on a subsequent page for the four-year selection of courses.

Courses leading to a B.A. with a Major in Spanish.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102, 111, 112 or 121	Classics 112, 202, 212 or 221	Language Elective	Language Elective
English 101	English	Philosophy	SPANISH
French 120, 124	French 220, 224,	SPANISH	(Three Electives
128 or 130	228, 230-240,	(Two Electives	from 420, 430,
Mathematics 101	250 or 260	from 300, 320,	440, 450 & 460)
or Science 101	Philosophy	330 & 340)	Theology or
SPANISH 100	SPANISH 200	Theology or	Elective *
One Elective	Theology or Elective *	Elective *	

* Two Theology courses must be taken over the four years; if Theology has been chosen as a First Year elective, another Theology course may be taken at this time or later when possible; if Theology is not an elective at this time, students would do well to take one in line with their field of concentration.

SPANISH

- 100 Functional Spanish** D. Williamson
Essentials of pronunciation and grammar; composition, graded reading of Spanish texts, introducing the student to the Spanish and Spanish American civilizations. For students with no previous knowledge of Spanish.
Lectures: 3 hours per week for two terms. Language Lab.: one hour per week for two terms.
- 200 Intermediate Spanish** E. Ottolenghi
Grammar review; practice in conversation composition; selections from the writings of the 19th and 20th centuries introducing the student to the literature of Spain and of Spanish America.
Lectures: 3 hours per week for two terms. Language Lab.: one hour per week for two terms.
- 300 Spanish Literature and Language** E. Ottolenghi
Contemporary literature. From Modernism to the present day. Advanced composition and conversation.
Lectures: 3 hours per week for two terms.
- 320 The Spanish Civilization. (not offered in 1967-68).**
The Spanish Civilization in the old and in the new continent.
Lectures: 3 hours per week for two terms.
- 330 Spanish Literature.** E. Ottolenghi
A chronical and comparative consideration of Spanish writers from the *Poema de mio Cid* to the post-war period.
Lectures: 3 hours per week for two terms.
- 340 Literature of the Golden Age. (not offered in 1967-68)**
Lectures: 3 hours per week for two terms.
- 370 Advanced stylistics and phonetics. (not offered in 1967-68).**
Lectures: 3 hours per week for two terms.
- 420 Twentieth-Century Literature in Spain. (not offered in 1967-68).**
From the Generation of '98 to the present day.
Lectures: 3 hours per week for two terms.
- 430 Literature of the Nineteenth Century. (not offered in 1967-68)**
Lectures: 3 hours per week for two terms.
- 440 Latin American Literature.** E. Ottolenghi
From the colonization period to the present day, with particular emphasis on 20th century authors.
Lectures: 3 hours per week for two terms.
- 450 Cervantes. (not offered in 1967-68)**
Lectures: 3 hours per week for two terms.
- 460 Old Spanish Language and Literature. (not offered in 1967-68)**
Readings in medieval texts.
Lectures: 3 hours per week for two terms.

Courses leading to a B.A. with a Major in German.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102, 111, 112 or 121 English 101 French 120, 124, 128 or 130 GERMAN 100 Mathematics 101 or Science 101 One Elective	Classics 112, 202, 212 or 221 English French 220, 224, 228, 230-240, 250 or 260 GERMAN 200 Philosophy Theology or Elective *	GERMAN 470 or History 204 GERMAN (Two Electives from 300, 330, 340 & 370) Philosophy Theology or Elective *	GERMAN (Three Electives from 400, 420, 430, 450 & 470) Language (One Elective) Theology or Elective *

* Two Theology courses must be taken over the four years; if Theology 101 has been chosen as a First Year elective, another Theology course may be taken at this time or later when possible; if Theology is not an elective at this time, students would do well to take one in line with their field of concentration.

GERMAN

- 100 Functional German.** U. Sautter
An elementary course for students with little or no knowledge of German.
A lecture and laboratory course.
Three hours per week for two terms.
- 200 Intermediate German.** U. Sautter
Practice in grammar and conversation; composition, readings from modern German authors.
A lecture and practice course.
Three hours per week for two terms.
- 300 Survey of German Literature.** U. Sautter
A chronical consideration of German Literature from the 16th to the 20th centuries. Composition and conversation.
Lectures: 3 hours per week for two terms.
- 330 Contemporary Literature.** U. Sautter
Selected readings and studies from 20th Century literature.
Lectures: 3 hours per week for two terms.
- 340 From Enlightenment to Classicism. (not offered in 1967-68)**
- 370 Advanced Stylistics. (not offered in 1967-68)**
- 400 Introduction to Middle High German. (not offered in 1967-68)**
- 420 Literature of the Romantic Period. (not offered in 1967-68)**
- 430 From Realism to Expressionism. (not offered in 1967-68)**
- 450 Goethe. (not offered in 1967-68)**
- 470 German History and Civilization. (not offered in 1967-68)**

ITALIAN

100 Functional Italian

J. Costa

An elementary course for students with little or no knowledge of Italian.

A lecture and laboratory course.

Three hours per week for two terms.

200 Intermediate Italian.

J. Costa

Practice in grammar and conversation; composition, readings from modern Italian authors.

A lecture and practice course.

Three hours per week for two terms.

300 Italian Literature and Language.

J. Costa

Survey of Italian Literature and its expression of Italian civilization. Advanced composition and conversation.

Lectures : 3 hours per week for two terms.

330 Italian Literature.

Realism and Neo-Realism in the contemporary novel.

Lectures and/or seminars : 3 hours per week for two terms.

Courses leading to a B.A. with double Majors in Modern Languages.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102, 111, 112 or 121	English	MODERN LANG. (1) French	MODERN LANG. (1)
English 101	French 224, 228, 230-240, 250 or 260	(One Elective from : the 300's in German, Italian, or Spanish)	(One Elective from : the 300's or 400's in either German, Italian, or Spanish)
French 120, 124, 128 or 130	History	MODERN LANG. (2) (Two Electives from : MODERN LANG. 200, Italian 200, or Spanish 200)	MODERN LANG. (2) (One Elective from : the 300's in German, Italian, or Spanish)
Mathematics 101 or Science 101	MODERN LANG. (1) (One Elective from : MODERN LANG. (1) (One Elective from : German 200, Italian 200, or Spanish 200)	MODERN LANG. (2) (Two Electives from : MODERN LANG. (2) (One Elective from : German, Italian, or Spanish)	MODERN LANG. (2) (One Elective from : the 300's or 400's in either German, Italian, or Spanish)
Two Electives	MODERN LANG. (2) (One Elective from : German 200, Italian 200, or Spanish 200)	Philosophy	One Elective in one of the two Major MODERN LANGUAGES
	Philosophy	One Elective from Political Science or Sociology	Theology

philosophy



J. P. Doyle, Associate Professor (Chairman)
 R. C. Hidders Associate Professor
 A. S. Kawczak Associate Professor
 V. J. McNamara Associate Professor
 E. Joos Assistant Professor
 D. Park Assistant Professor
 H. H. Lau Assistant Professor
 J. G. McGraw Assistant Professor
 J. D. Morgan Assistant Professor
 M. F. Reidy Assistant Professor
 E. Egan Assistant Professor
 C. Grey Lecturer
 E. Milne Lecturer
 G. Beretta Lecturer

Courses leading to an Honours B.A. in Philosophy.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 or 112 or 121	Classics 112 or 202 or 212 or 221	HISTORY OF PHILOSOPHY	HISTORY OF PHILOSOPHY
English 101	Language	PHILOSOPHY	PHILOSOPHY
French	PHILOSOPHY 200	SEMINAR	SEMINAR
Mathematics 101 or Science 101	HISTORY OF PHILOSOPHY	PHILOSOPHY (Two Electives)	PHILOSOPHY (Two Electives)
Two Electives	Theology	Theology	One Elective
	One Elective		

Courses leading to a B.A. with a Major in Philosophy

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 or 112 or 121	Classics 112 or 202 or 212 or 221	HISTORY OF PHILOSOPHY	HISTORY OF PHILOSOPHY
English 101	English	PHILOSOPHY	PHILOSOPHY
French	French	SEMINAR	SEMINAR
Mathematics 101 or Science 101	HISTORY OF PHILOSOPHY	Theology	Three Electives
Two Electives	PHILOSOPHY 200	Two Electives	
	Theology		

Note : The requirement in Philosophy is satisfied by Phil. 200 plus one course from the 300 series.

Courses numbered 320-329 and 420-429 are scheduled to be available to students in the Faculty of Science and are normally restricted to them.

200 Introduction to Philosophy.

Staff

A consideration of major problems in Philosophy and types of answers given to them. This course is a prerequisite for any further courses.

Lectures : 2 hours per week for two terms.

- 310 Philosophy of Nature and Science.**
An introduction to the problems of nature and science from the Greeks to Contemporary thinkers through reading and discussion of selected texts.
Lectures: 2 hours per week for two terms.
- 311 Philosophical Psychology (Philosophy of Man).** C. Grey
An introduction to some of the philosophical problems surrounding studies of human behaviour.
Lectures: 2 hours per week for two terms.
- 312 Philosophy of Human Knowledge.** H. H. Lau
Formulation of the problem of human knowing based on a study of texts of Plato, Aristotle, Descartes, Locke, Berkeley, Hume and Kant.
Lectures: 2 hours per week for two terms.
- 313 Political Philosophy.** V. J. McNamara
This course treats of the philosophical content of political theories from Greek to contemporary times through readings from selected texts.
Lectures: 2 hours per week for two terms.
- 314 Ethics.** J. P. Doyle
A consideration of principles underlying moral evaluation, with reference to classical and other positions.
Lectures: 2 hours per week for two terms.
- 315 Philosophy of God.** J. G. McGraw
The question of natural knowledge of God and the problems attendant upon it.
Lectures: 2 hours per week for two terms.
- 317 Ethics.** D. Park
An analysis of some major questions discussed in the writings of Plato, Aristotle, Epictetus, Hobbes, Bentham, Butler, Mill and Kant.
Lectures: 2 hours per week for two terms.
- 318 Ethics and Society.** R. Hinners
Classical types and perennial problems of social and political philosophy with particular attention to their moral bases and consequences; a general consideration of classical concepts of legal and moral rules, rights and obligations, authority, the state, freedom and justice as exemplified in the writings of Plato, Aristotle, Aquinas, Hobbes, Locke and Mill; a more detailed consideration of the notions of history, ideology, social violence, technology and work as practised in contemporary societies and as conceived in the writings of Marxist and non-Marxist social theoreticians.
Lectures: 2 hours per week for two terms.
- 319 Metaphysics.** G. Beretta
Lectures: 2 hours per week for two terms.
- 321 Philosophy of Human Nature.** J. P. Doyle
A study of classical positions on the nature of man viewed in relation to representative contemporary positions.
Lectures: 2 hours per week for two terms.

- 322 Philosophy of Human Knowledge.** H. H. Lau
Study of texts of Plato, Aristotle, Descartes, Berkeley, Hume, Kant and Pierce.
Lectures: 2 hours per week for two terms.
- 323 Political Philosophy.** V. J. McNamara
A study of the philosophical foundations of communism, Fascism, and Democracy through the reading of related texts.
Lectures: 2 hours per week for two terms.
- 324 Ethics: Questions in Moral Evaluation of Human Conduct.** J. D. Morgan
A consideration of certain moral problems and the theoretical bases upon which answers are suggested. Special consideration is given to the problems of Capital Punishment, Divorce, Suicide, Birth Control and Pre-Marital Sexual conduct.
Lectures: 2 hours per week for two terms.
- 325 Philosophy of God.** G. Beretta
Lectures: 2 hours per week for two terms.
- 326 Philosophy of Man.** C. Grey
Lectures: 2 hours per week for two terms.
- 327 General Dialectics.** M. F. Reidy
Studies in the practical structure of decisive argument and the theories upon which it is based. Readings: Plato, Aristotle, Abelard, Thomas Aquinas, Ramus, Hegel and others.
Lectures: 2 hours per week for two terms.
- 410 Philosophy of History.** E. Milne
A philosophical examination of historical enquiry — the problem of historical explanation, the role of generalisation and value judgment in history — and of representative theories of historical development, e.g. those of Marx and Toynbee.
Lectures: 2 hours per week for two terms.
- 411 A History of Ancient Western Philosophy.** M. F. Reidy
A study of the major figures in Greek and Roman Philosophy from Thales to Plotinus.
Lectures: 2 hours per week for two terms.
- 412 Medieval Philosophy.**
Lectures: 2 hours per week for two terms.
- 413 Modern Philosophy: British Philosophy (for 1967-68).** D. Park
A systematic study of some major concepts expressed in the writings of Bacon, Locke, Berkeley, Hume and J. S. Mill.
Lectures: 2 hours per week for two terms.
- 414 Contemporary Philosophical Movements.** A. S. Kawczak
Reading and analysis of selected texts in Existentialism, Marxism, Logical Positivism, Pragmatism and Philosophy of Personality. Discussion will center on the following problems: Crisis in Contemporary Moral Philosophy, the New Humanism, the Meaning of History, the Emerging Man and Society of the future.
Lectures: 2 hours per week for two terms.

Readings: K. Dabrowski, *Positive Disintegration*; W. Kaufmann, *Existentialism from Dostoevsky to Sartre*; E. Fromm, *Marx's Concept of Man*; E. Fromm, *The Sane Society*; K. Popper, *The Open Society and His Enemies*, Vol. II; S. Maritain, *Man and the State*; M. White, *The Age of Analysis*, Ch. 8, 11, 13, T. de Chardin, *The Future of Man*.

415 American Philosophy.

J. D. Morgan

A study of the writings of American Philosophers from colonial times to the present with special emphasis on the Pragmatists.

Lectures: 2 hours per week for two terms.
(Not offered 1967-68).

416 Aesthetics.

E. Egan

Lectures: 2 hours per week for two terms.

422 Logic and Scientific Method.

A. S. Kawczak

The course comprises: 1) elements of Modern Formal Logic: First order functional Calculus, Techniques of Formal Proof, Theory of Sets, Boolean Algebra; 2) A comparative Study of the Structure and Methods of Pure Mathematics, Physical and Social Sciences, History and Evaluative Disciplines.

Lectures: 2 hours per week for two terms.
Textbook: P. Suppes, *Introduction to Logic*, Van Nostrand.

423 Marxism and Existentialism.

R. C. Hinners

The development of Marxism and existence philosophies from their common Hegelian origin in the light of recent attempts to synthesize them. Selected readings from the works of Hegel, Marx, Lenin, Kierkegaard, Sartre, and Merleau-Ponty.

Lectures: 2 hours per week for two terms.

424 Ethics.

E. Egan

Lectures: 2 hours per week for two terms.

425 Philosophy of Love.

J. G. McGraw

Analysis of various philosophical positions concerning the nature of love including the theories of Plato, Aristotle, Thomas Aquinas, Spinoza, Kant, Schopenhauer, Kierkegaard, Nietzsche, Ortega y Gasset, Teilhard de Chardin, Sartre, and Marcel.

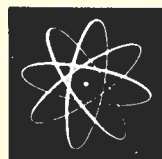
Lectures: 2 hours per week for two terms.

517 Seminar — Problems in Natural Law.

J. D. Morgan

Lectures: 3 hours per week for two terms.

physics



C. E. Eappen Associate Professor (Chairman)
S. N. Bagchi Professor
N. de Takacsy Assistant Professor
R. L. Kovacs Assistant Professor
(P) W. P. Lonc, S.J.
Rev. H. J. Macphee, S.J. Professor
S. Santhanam, Assistant Professor
J. Shin Assistant Professor
K. K. Tam Assistant Professor

Honour and Strong Major Programme.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101	Mathematics 231	Philosophy	English
Chemistry 102	Mathematics 234	PHYSICS 306 or 302	PHYSICS 304 or 310
French	Philosophy	PHYSICS 310 or 304	PHYSICS 305
Mathematics 120	PHYSICS 205	PHYSICS 304	PHYSICS 403
Mathematics 131	PHYSICS 220	PHYSICS 307	PHYSICS 404 or 306
PHYSICS 101	PHYSICS 301	PHYSICS 320	PHYSICS 408
Theology	PHYSICS 309	PHYSICS 410	PHYSICS 411
One Elective (in second term) from : Biology 101 Geot. Sc. 202 Mathematics 121		Theology	PHYSICS 420 Theology or Philosophy

Strong Majors do not take Physics 404, 408, 410, 411 and 420.



ELECTRONICS LABORATORY

*** Major Programme.**

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101	Chemistry 231	Mathematics 234	English
Chemistry 102	Mathematics 231	Philosophy	PHYSICS 302
French	Mathematics 221	PHYSICS 301	PHYSICS 311
Mathematics 120	PHYSICS 205	PHYSICS 304	Philosophy or
Mathematics 131	Philosophy	PHYSICS 307	Theology
PHYSICS 101	Theology	Science Elective	One Elective
Theology			
One Elective (in second term) from :			
Biology 101			
Geot. Sc. 202			
Mathematics 121			

* Will not be offered after 1968-69.

General Science Programme, Concentration in Physics.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101	Mathematics 232	Philosophy	English
Chemistry 102	Philosophy	PHYSICS 307	Philosophy
French	PHYSICS 201	PHYSICS 311	or Theology
Mathematics 120	PHYSICS 205	Sc. Elective I *	PHYSICS 302
Mathematics 131	One Elective from:	Theology	PHYSICS 304
PHYSICS 101	Biology		Sc. Elective II *
Theology	Chemistry 231		
One Elective (in second term) from :	Geotech. Sc.		
Biology 101			
Geot. Sc. 202			
Mathematics 121			

* Subjects to be decided by the department.

101 General College Physics. Full Course.

An introductory course on the elements of mechanics, sound, heat, electricity and light.

Lectures : 3 hours per week for two terms.

Lab. : 1 period per week for two terms.

Text : Sears and Zemansky : *College Physics* (Addison-Wesley).

103 Heat and Sound. Half Course.

Gas laws, kinetic theory, thermodynamics, expansion, changes of state, heat transfer. Vibration, waves and acoustics.

Lectures : 2 hours per week plus one hour every alternate week, for one term.

Lab. : 2 hours per week for one term.

Text : To be announced.

201 Heat, Light and Sound. Full Course.

Lectures : 3 hours per week for two terms.

Lab. : 1 period per week for two terms.

Text : To be announced.

205 Electricity and Magnetism. Full Course.

Electrostatic field, capacitance, dielectrics, direct current circuits, thermoelectricity, magnetic fields, electromagnetic induction, alternating current circuits, Maxwell's equations.

Lectures : 3 hours per week for two terms.

Lab. : 1 period per week for two terms.

Text : KIP : *Fundamentals of Electricity and Magnetism* (McGraw-Hill).

206 Electricity and Light. Full Course.

Electrostatic field, capacitance, dielectrics, Gauss' theorem, direct current and resistance measurements, magnetic field, electromagnetic induction, Maxwell's equations and electromagnetic waves.

Waves and rays, lenses, the eye, illumination and optical instruments.

Lectures : 2 hours per week for two terms.

Lab. : 2 hours per week for two terms.

Text : To be announced.

Note : About one quarter of the course will be spent on Light.

220 Methods of Mathematical Physics I. Full Course.

Elementary linear algebra from the standpoint of physics : Finite dimensional vector spaces, matrices and determinants, transformations of co-ordinates, systems of simultaneous linear equations, characteristic value problems and quadratic forms, vector analysis, tensors of second rank, polynomials.

Lectures : 3 hours per week for two terms.

References : Hadley, *Linear Algebra* (Addison-Wesley); *Vector Analysis* (Schaum's Series).

301 Optics. Half Course.

Principles of geometrical and physical optics, interference, diffraction, polarisation, double refraction.

Lectures : 3 hours per week, first term.

Text : Morgan : *Introduction to Geometrical and Physical Optics* (McGraw-Hill).

302 Modern Physics. Full Course.

Part I : special relativity, quantum effects, particle aspects of electromagnetic radiation, wave aspects of material particles, nuclear atom and Bohr theory, elementary quantum mechanics of atoms.

Part II : X-ray spectra, radioactivity, nuclear structure, accelerators and detectors, nuclear reactions.

Lectures : 3 hours per week for two terms.

Text : Weidner and Sells, *Elementary Modern Physics* (Allyn and Bacon).

303 Modern Physics. Half Course.

This is Part I of Physics 302, taken during first term.

304 Thermodynamics. Half Course.

An introductory course in thermodynamics and kinetic theory. It includes the first and second laws of thermodynamics with ample applications and introduces the Helmholtz and Gibbs functions.

Lectures: 3 hours per week, first term.

Text: Sears, *Introduction to Thermodynamics, Kinetic theory and Statistical Mechanics* (Addison-Wesley).

305 Statistical Mechanics. Half Course.

Lectures: 3 hours per week, second term.

Text: To be announced.

306 Modern Physics and Introduction to Quantum Mechanics. Full Course.

Relativity, classical experiments and theories of thermal radiation, electrons, photon interactions, atomic models and spectra, Bohra atom, old quantum mechanics; Solutions to Schrödinger's equation for barriers, well potentials, harmonic oscillator and one-electron atoms, perturbation theory, magnetic moments, spin, identical particles, multi-electron atoms, molecules.

Lectures: 3 hours per week for two terms.

Lab.: 1 period per week for two terms.

Text: Eisberg, *Fundamentals of Modern Physics* (John Wiley).

lectures, X-rays.

307 Electronic Circuits. Full Course.

AC and DC circuit network theory, introduction to semiconductor theory, analysis of half-wave and full wave power supplies and filter networks, voltage clamper, doubler and n-tupler, transistor principles, amplifiers and their equivalent circuits using h-parameters, vacuum triodes and pentodes, analysis of power amplifiers, oscillators, high frequency and pulse circuits.

Note: Emphasis will be made on solid state devices.

Lectures: 3 hours per week, first term; 2 hours per week, second term.

Lab.: 1 period per week for two terms.

Text: Romanowitz, *Fundamentals of Semi conductor and Tube Electronics* (John Wiley).

309 Theoretical Mechanics I. Half Course.

Reference systems, basic concepts, systems in equilibrium, one-dimensional motion of a particle, kinematics of a system of particles, plane motion of a particle, motion of a system of particles.

Lectures: 3 hours per week, second term.

Text: Prepared notes.

**310 Theoretical Mechanics II. Half Course.
(Not offered in 1967-68)**

Plane motion of a rigid body, motion with respect to non-inertial frames, motion of a particle in space, motion of a rigid body about a fixed point, introduction to Lagrange's and Hamilton's equations of motion, introduction to the theory of small oscillations.

Lectures: 3 hours per week, first term.

Text: Prepared notes.

311 Theoretical Mechanics. Full Course.

A course treating most of the topics of Physics 309, 310 and 410, but with simpler applications.

Lectures: 3 hours per week for two terms.

Text: Prepared notes.

320 Methods of Mathematical Physics II. Full Course.

Calculus of variations; techniques for the solution of partial differential equations of physics by the method of separation of variables with special reference to: vibration of a string, vibration of a membrane, the potential equation, equation for heat conduction and diffusion; orthogonal series, Sturm-Liouville problems; elementary properties of Legendre functions, spherical harmonics, Bessel functions, functions of Hermite and Laguerre; Dirac's delta function.

Lectures: 3 hours per week for two terms.

References: Sagan, *Boundary and Eigenvalue Problems of Mathematical Physics* (Wiley); Sneddon, *Special Functions of Mathematical Physics and Chemistry* (Oliver and Boyd); Weinstock, *Calculus of Variations* (McGraw-Hill); Tolstov, *Fourier Series* (Prentice Hall).

403 Electromagnetic Theory. Full Course.

Analysis of electrostatic and electromagnetic fields, non-stationary fields and Maxwell's equations, waves in source-free space, electromagnetic radiation, basic relativistic electrodynamics.

Lectures: 3 hours per week for two terms.

References: Jackson, *Classical Electrodynamics* (John Wiley); Panofsky and Phillips, *Classical Electricity and Magnetism* (Addison-Wesley).

404 Nuclear Physics. Full Course.

Radioactivity, alpha-particle spectra, beta-particle spectra, positron emission, orbital electron capture, gamma ray emission; methods of detecting, identifying and measuring energies of gamma rays and charged particles; theory of energy loss of charged particles and gamma rays in matter.

Nuclear structure and nuclear models, nuclear reactions; neutrons, detection, slowing down and diffusion; fission, fusion, chain reaction, nuclear reactors: introduction to high energy physics.

Lectures: 3 hours per week for two terms.

Lab.: 1 period per week for two terms.

Text: Smith, *Nuclear Physics* (Pergamon Press).

References: SeGre, *Nuclei and Particles* (W. A. Benjamin); Kaplan, *Nuclear Physics* (Addison-Wesley); Evans, *Atomic Nucleus* (McGraw-Hill); Preston, *Physics of the Nucleus* (Addison-Wesley).

408 Elements of Quantum Mechanics and Selected Topics in Contemporary Physics. Full Course.

Lectures: 3 hours per week for two terms.

410 Advanced Theoretical Mechanics. Half Course.
(Not offered in 1967-68)

Variational principles in mechanics, Lagrange's equations of motion, central orbits and Rutherford scattering, kinematics of rigid body motion, rigid body equations of motion, small oscillations of discrete particles and of continuous media, Hamilton's equations of motion, canonical transformations, Hamilton-Jacobi theory.

Lectures: 3 hours per week, second term.

Text: Goldstein, *Classical Mechanics* (Addison-Wesley).

411 Special Relativity. Half Course (Not offered in 1967-68)

Classical relativity, first and second postulates, Lorentz transformation, time dilation, length contraction, velocity and acceleration, world vectors, momentum and energy, center-of-momentum frames, collision problems, dynamics of a particle, covariant Lagrangian and Hamiltonian equations of motion, geometry of space-time.

Lectures: 3 hours per week, first term.

Text: Smith, *Introduction to Special Relativity* (W. A. Benjamin).

References: Synge, *Relativity, the Special Theory* (North-Holland); Hagerdon, *Relativistic Kinematics* (W. A. Benjamin).

420 Methods of Mathematical Physics III. Full Course.

Fourier transforms and convolution operations; Green's function; introduction to integral transforms and linear integral equations.

Pfaffian differential forms and equations with applications to thermodynamics; linear partial differential equations of the first order; linear partial differential equations of the second order; hyperbolic, parabolic and elliptic types.

Lectures: 3 hours per week for two terms.

References: Hosemann and Bagchi: *Direct Analysis of Diffraction by Matter* (North-Holland); Sneddon: *Fourier Transforms* (McGraw-Hill); Sneddon: *Partial Differential Equations* (McGraw-Hill); Miller: *Partial Differential Equations* (John Wiley); Courant and Hilbert: *Methods of Mathematical Physics*, Vol. I and II; Koshlyakov: *Differential Equations of Mathematical Physics* (North-Holland); Lovitt: *Linear Integral Equations* (Dover).

political science



H. Habib, Associate Professor (Chairman)

R. Coyte Assistant Professor

P. Dai Visiting Professor

J. Moore Assistant Professor

A. McDonald Sessional Lecturer

D. Porter Sessional Lecturer

D. Vince Sessional Lecturer

Courses leading to a B.A. with a Major in Political Science.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 or 112 or 121	Classics 112 or 202 or 212 or 221	Philosophy POLITICAL SCIENCE 315	POLITICAL SCIENCE (Three Electives) Theology **
English 101	English	POLITICAL SCIENCE One Elective *	
French	French		
Mathematics 101 or Science 101	Philosophy 200 POLITICAL SCIENCE 201	(Two Electives) One Elective *	
Two Electives	Theology		

A Major in Political Science consists of a minimum of six full courses in the subject. A student majoring in Political Science must include Political Science 201 and 315 in his programme. A student may substitute any course from the Social Sciences or the Humanities for a Political Science elective.

Courses leading to a B.A. with an Honours in Political Science.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111, or 112 or 121	English Philosophy	Philosophy POLITICAL	POLITICAL SCIENCE 371 H
English 101	POLITICAL	SCIENCE 317	POLITICAL SCIENCE (Three Electives)
French	SCIENCE 201	POLITICAL SCIENCE (Two Electives)	Theology **
Mathematics 101 or Science 101	POLITICAL SCIENCE 315	One Elective *	
Two Electives	Theology One Elective *		

* Elective: any course in the Humanities or Social Sciences other than Political Science.

** If the Theology requirement is fulfilled in the First Year, then a student will be able to take a Political Science elective in his Fourth Year.

An Honours in Political Science consists of a minimum of six full courses in the subject, and an Honours Senior Seminar. A student honouring in Political Science must include Political Science 201 and 315 in his Sophomore Year, Political Science 317 in his Junior Year and the Seminar, Political Science 371 H, in his Senior Year. A student may substitute any course from the Social Sciences or the Humanities for a Political Science elective with the approval of the Political Science Department. All Honours students must pass a comprehensive oral examination in their Senior Year.

201 An Introduction to Political Science. Full Course.

H. Habib

A basic course in the fundamentals and significance of Political Science.

Lectures: 3 hours per week for two terms.

Text: Corry and Abraham, *Elements of Democratic Government*. Oxford University Press.

211 Britain and the Commonwealth. Full Course.

R. Coyte

Government and Politics of Great Britain, and the nature and future of Commonwealth relations.

Lectures: 3 hours per week for two terms.

Text: Carter-Hertz, *Major Foreign Powers*, Harcourt, Brace and World. Miller, *The Commonwealth in the World Today*. Duckworth.

217 The Middle East. Full Course.

H. Habib

Government and Politics of the Middle East. An historical and political survey.

Lectures: 3 hours per week for two terms.

Texts: Kirk, *A Short History of the Middle East*. Methuen. Harari, *Government and Politics of the Middle East*. Prentice Hall.

219 Political Development. Full Course.

D. Porter

An analysis of the evolution of political societies toward greater complexity and greater fulfillment of political goals. Special emphasis will be upon the political systems of the Southern Hemisphere.

Lectures: 3 hours per week for two terms.

Text: Organski, *The Stages of Political Development*, Knopf.

229 Public Administration. Full Course.

D. Vince

A theoretical study of government management and institutions, based on the Canadian administrative experience and related to Anglo-American comparative practice.

Lectures: 3 hours per week for two terms.

Text: Hodgetts and Corbett, *Canadian Public Administration*, MacMillan.

237 International Law. Full Course.

H. Habib

An introduction to International Law.

Lectures: 3 hours per week for two terms.

Text: Whitaker, *Politics and Power*, Harper and Row.

251 Canadian Government. Full Course.

D. Vince

An institutional and functional analysis of the political process in Canada.

Prerequisite: Political Science 201 or equivalent.

Lectures: 3 hours per week for two terms.

Text: Dawson, *Government of Canada*, Toronto University Press.

253 An Introduction to Legal Theory and the Canadian Constitution. Full Course.

A systematic inquiry into the sources and principles of law and the Canadian Constitutional system, with special reference to judicial interpretation.

Prerequisite: Political Science 201 or approval of the Department of Political Science.

257 American Government. Full Course.

R. Coyte

A study of the American Political Institutions.

Prerequisite: Political Science 201 or equivalent.

Lectures: 3 hours per week for two terms.

Text: Burns and Peltason, *Government of the People*, Prentice Hall.

271 International Politics. Full Course.

P. Dai

A theoretical analysis of inter-state relations, drawing upon development in the Foreign Policy, Diplomacy and International Organization of the Twentieth Century.

Prerequisite: Political Science 201 or approval of the Department of Political Science.

Lectures: 3 hours per week for two terms.

Text: Morgenthau, *Politics Among Nations*, Knopf.

273 International Organization. Full Course.

A survey and analysis of attempts to institutionalize order and change in the international society. Chief emphasis will be upon the United Nations.

Prerequisite: Political Science 201 or equivalent.

Lectures: 3 hours per week for two terms.

Text: Claude, *Swords Into Plowshares*, Random House.

311 Comparative Government. Full Course.

H. Habib

A survey of contemporary political systems, forces and problems in Western Europe with special emphasis on France, Germany and the United Kingdom.

Lectures: 3 hours per week for two terms.

Text: Carter-Hertz, *Major Foreign Powers*. Harcourt, Brace and World.

315 Political Philosophy. Full Course.

J. Moore

Ancient to the Reformation.

Prerequisite: Political Science 201 or approval of the Department of Political Science.

Lectures: 3 hours per week for two terms.

Text: Sabine, *A History of Political Theory*, Holt, Rinehart and Winston.

317 Political Philosophy. Full Course.

J. Moore

Post Reformation to the Twentieth Century.

Prerequisite: Political Science 201 or approval of the Department of Political Science.

Lectures: 3 hours per week for two terms.

Text: Sabine, *A History of Political Theory*, Holt, Rinehart and Winston.

319 Political Theory. Full Course.

R. Coyte

A critical analysis of contemporary political theory.

Prerequisite: Political Science 201 or approval of the Department of Political Science.

Lectures: 3 hours per week for two terms.

Text: Stankiewicz, *Political Thought Since World War II*, Collier-Macmillan Ltd.

323 Latin American Government. Full Course.

Government and Politics of Latin America.

Lectures: 3 hours per week for two terms.

Text: Needler, *Political Systems of Latin America*, Van Nostrand.

325 African Government and Politics. Full Course.

D. Porter

Colonialism, imperialism and the rise of nationalism; government and politics of the independent African states.

Lectures: 3 hours per week for two terms.

- 327 Contemporary Politics of the Far East.** P. Dai
An analysis of the political developments of China and Japan since the 19th century with special emphasis on the traditional institutions and social structure; their transformation brought about by the impact of the West; the international relations in East Asia; and the rise of Communism.
Lectures: 3 hours per week for two terms.
- 361 The Soviet Union. Full Course.** R. Coyte
Government and Politics of the Soviet Union. Basic theories of Communism; evolution of the Soviet System.
Lectures: 3 hours per week for two terms.
Text: McClosky and Turner, *The Soviet Dictatorship*, McGraw-Hill.
- 371 Senior Seminar. Full Course.** P. Dai
Workshop in Problems of Political Science, Method of group Inquiry used to forward constructive, critical thinking and jointly reached conclusions.
Seminar: 3 hours per week for two terms. Tutor will direct work in first term.
- 371H Senior Seminar. Full Course.**
Workshop in Problems of Political Science, Method of Group Inquiry used to forward constructive, critical thinking and jointly reached conclusions.
Seminar: 3 hours per week for two terms. Tutor will direct work in first term. Open only for Honours Students.



psychology

V. Maheux Associate Professor (Chairman)
J. Lavery Associate Professor
J. H. Bauer Assistant Professor
H. W. Ladd Assistant Professor

PREAMBLE

The Department of Psychology offers a Major programme leading to both a B.A. and a B.Sc. The curriculum is designed to provide a general cultural training and to give adequate preparation for graduate studies in Psychology.

A Major in Psychology consists of a minimum of six full courses in the subject. B.A. students majoring in Psychology must include Statistics & Research Methods as well as Social Psychology in their major programme. B.Sc. students must include Statistics & Research Methods and Physiological Psychology.

Courses leading to a B.A. with a Major in Psychology.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 or 112 or 121	Biology 231	PSYCHOLOGY 305	English
English 101	Classics 112 or 202	PSYCHOLOGY 310	Philosophy
French	or 212 or 221	Theology	Three Electives *
Mathematics 101	French	Two Electives *	
Two Electives	Philosophy		
	PSYCHOLOGY 201		
	Theology		

Courses leading to a B.Sc. with a Major in Psychology.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Chemistry 101	Biology 231	Biology 331	Philosophy or
Chemistry 102	Chemistry 221	Philosophy	Theology
French	and 222	PSYCHOLOGY 305	PSYCHOLOGY 355
Mathematics 120	English	Two Electives *	Three Electives *
Mathematics 131	Philosophy		
Physics 101	PSYCHOLOGY 201		
Theology	Theology		
One Elective (in second term)			
from:			
Biology 101			
Geot. Sc. 202			
Mathematics 121			

* Students may choose their electives from Biology, Chemistry, Communication Arts, English, French Studies, Modern Languages, Psychology, Sociology, etc. A French or Modern Language elective is especially suggested for students planning to pursue graduate studies. B.A. students may choose physiological Psychology as an elective with the permission of the Chairman of the Psychology Department. Biology 331 is a prerequisite to that course. In choosing their electives, students should consult as to prerequisites with the Departments concerned.

201 Introduction to Psychology. Full Course. J. Lavery

Course designed to provide the students with an understanding of the basic concepts and techniques of experimental psychology. Will cover some of the major areas of psychology such as learning, sensation and perception, intelligence, motivation, emotion.

Prerequisite to all other classes in Psychology.

Lectures: 3 hours per week for two terms.

Laboratory: 2 hours per week for two terms.

Text: Hebb, D.O. *A Textbook of Psychology*. Saunders, 1966.

301 Developmental Psychology. Full Course. J. H. Bauer

An examination of physical intellectual, emotional and social development from conception through to old age, with emphasis on child and adolescent development.

Lectures: 3 hours per week for two terms.

Text: Hurlock, E. B., *Child Development*. McGraw-Hill, 1964.

305 Statistics & Research Methods. Full Course.

J. H. Bauer and H. W. Ladd

Descriptive and inferential statistics with application to the analysis of behaviour. The second part of the course will be devoted to a close examination of methodology and research procedures utilized in Psychology. Students will be required to carry out investigations of psychological problems and to report them in the form of an Honours thesis. Required course for all majors in Psychology.

Lectures: 3 hours per week for two terms.

Laboratory: 3 hours per week for two terms.

Text: To be announced.

310 Social Psychology. Full Course.

This course is also listed as Sociology 201. For description, see Sociology.

Lectures: 3 hours per week for two terms.

350 Personality: Normal and Abnormal. Full Course.

V. Maheux

Survey of Personality structure and theories. Emphasis will be placed on the study of normal personality. Symptoms and dynamics of neuroses, psychoses, and other behavior disorders will be included for the purpose of clarifying normal personality processes.

Lectures: 3 hours per week for two terms.

Text: To be announced.

355 Physiological Psychology. Full Course.

V. Maheux

A study of the physiological basis of behaviour: sensory systems, response mechanisms, nervous system. Other topics include the physiological correlates of perception, motivation, emotion, learning and complex behaviour patterns.

Lectures: 3 hours per week for two terms.

Text: To be announced.

360 Motivation. Full Course.

J. Lavery

Analysis of emotional and motivational activities in terms of the factors determining their occurrence. The significance of arousal, blood chemistry, sensory cues, past experience, social environment, etc. will be discussed.

Lectures: 3 hours per week for two terms.

Text: To be announced.

365 Systematic Psychology. Full Course.

H. W. Ladd

Covering Schools of Psychology: Structuralism, Functionalism, Behaviourism, Gestalt Psychology, Psychoanalysis and a survey of contemporary learning theories, e.g. Guthrie, Tolman, Hull and Skinner.

Lectures: 3 hours per week for two terms.

Text: Kimble, G., Hilgard and Marquis' *Conditioning and Learning* Appleton-Century. Crofts, 1961.

**sociology**

J. Tascione Assistant Professor (Chairman)

J. Bender Visiting Professor

L. Menard Lecturer

Courses leading to a B.A. with a Major in Sociology.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 or 112 or 121	Classics 112 or 202 or 212 or 221	SOCIOLOGY 301	Philosophy
English 101	English	SOCIOLOGY 302	SOCIOLOGY 401
French	French	Theology	SOCIOLOGY 402
Mathematics 101	Philosophy	Two Electives	Two Electives
SOCIOLOGY 101	SOCIOLOGY 201		from social science
One Elective	Theology		(Psychology, Economics, Political Science, or History)

101 An Introduction to Sociology and Social Problems.

Full Course.

L. Menard

A survey of the basic concepts and theories of sociology as well as an analysis of selected social problems including population, minorities, alcoholism, drug addiction, crime and delinquency, suicide and others.

Lectures: 3 hours per week for two terms.

Texts: Kane, *Social Problems: A Situational-Value Approach*, Prentice-Hall; Vanderzanden, *Sociology*; Ronald: McDonagh & Simpson: *Social Problems: Persistent Challengers*, Holt, Rinehart & Winston.

201 Introduction to Social Psychology. Full Course.

J. Bender

A survey of the basic principles of social psychology including an analysis of motives, attitude values, perception and the interaction of individuals and groups.

Lectures: 3 hours per week for two terms.

301 Methods of Research. Full Course.

J. Tascione

A survey of common research methods employed in sociology such as questionnaires, schedules, content analysis, participant observation, etc. Half of the course will be devoted to basic statistics and the application of them in field research. A term paper based on field research is required.

Prerequisites: Sociology 101 or 102. Limited to Majors in Sociology.

Lectures: 3 hours per week for two terms, and one hour a week laboratory.

302 The Family and Other Social Institutions. Full Course.

to be appointed

A sociological and social psychological analysis of marriage, the family, covering dating, courtship, marriage prediction scales and others institutions such as education and religion.

Lectures: 3 hours per week for two terms.

401 Sociological Theory. Full Course.

J. Tascione

Theories of Society from Comte to Parsons. An analysis of contemporary schools and their roots in the ideas of late 19th and 20th Century theorists. Special emphasis on Structure-functionalism and symbolic interactionism.

Lectures: 3 hours per week for two terms.

402 Social Change. Full Course.

J. Bender

Social Change as distinguished from Social Dynamics. The major substantive changes of the past two centuries are analysed as are the theories which attempt to explain them. Methods and findings of recent studies of change are critically examined.

Lectures: 3 hours per week for two terms.

theology

	Rev. C. H. Henkey, Professor (Chairman)
	Rev. E. O'Brien, S.J. Professor (Director CTI)
	Rev. G. O'Brien, S.J. Associate Professor
	Rev. W. Bedard, O.F.M. Assistant Professor
	A. Webster Assistant Professor
	J. Hofbeck Assistant Professor
	S. Wesolowsky Assistant Professor
	Rev. W. J. Browne, S.J. Assistant Professor
	R. Barberis Lecturer
	J. Collins Lecturer
	P. Garnet Lecturer
	F. Sawyer Lecturer
	M. Spicer Lecturer
	P. Jones Lecturer
	Rev. B. Somfai, S.J. Instructor
	Rabbi D. Hartman Instructor
	Rev. B. Sloane Instructor



Courses leading to the Honours B.A. in Theology.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
Classics 102 or 111 or 112 or 121	Classics 112 or 202 or 212 or 221	Philosophy Social Science THEOLOGY (Three Electives)	Philosophy THEOLOGY (Three Electives)
English 101	French		
French	Philosophy		
Mathematics 101 or Science 101	THEOLOGY (Three Electives)		
THEOLOGY 210A			
One Elective			

Courses leading to a B.A. with a Major in Theology.

FIRST YEAR	SECOND YEAR	THIRD YEAR	FOURTH YEAR
The same as in the Honours Theology programme	Classics 112 or 202 or 212 or 221 English French Philosophy THEOLOGY (Two Electives)	Philosophy Social Science (Two Electives) THEOLOGY (Two Electives)	Philosophy Philosophy Social Science THEOLOGY (Two Electives)

GENERAL COURSES (All courses marked "F" will have special sections for Science and Commerce freshman students. These sections include a preliminary introduction to Theology. Any changes in texts and readings will be announced by the professors concerned).

RELIGIOUS STUDIES (non-denominational).

210A Image of Man. Full Course.

C. H. Henkey

The course is a religious anthropology which intends to sound and to explore the mystery of human existence in its personal, social and dynamic structure. The qualification 'religious' implies that man's ultimate rootedness and orientation towards God will be discussed.

Lectures: 3 hours per week for two terms.

Texts: Teilhard de Chardin, *Phenomenon of Man* (Torchbook); Heschel, *What is Man?* (Stanford); Rahner, *Hominisation* (Herder & Herder pb.); Eliade, *Cosmos and History*, (Torchbook).

Further Readings: Haring, *Law of Christ I* (Mercier); Schefczyk, *Man's search for himself* (Sheed & Ward); Lecomte du Noüy, *Human destiny* (Mentor); Jaspers, *Man in the modern age* (Doubleday Anchor); Jung, *Modern man in search of a soul* (Harvest pb.).

215F Introduction to the Old Testament. Full Course.

Historical background and literary analysis. P. Garnet

Lectures: 3 hours per week for two terms.

Texts: *The Oxford Annotated Bible R.S.V.* (O.U.P.); Anderson, *Understanding the Old Testament* (Prentice-Hall); D. W. Thomas, *Documents from Old Testament Times* (Harper).
Further Readings: W. F. Albright, *The Biblical Period* (Harper); G. E. Wright, and R. Fuller, *The Book of the Acts of God* (Anchor); H. H. Rowley, *The Growth of the Old Testament* (Harper).

216 Introduction to the New Testament. Full Course.

Historical background and literary analysis. P. Garnet

Lectures: 3 hours per week for two terms.

Texts: *The Oxford Annotated Bible R.S.V.* (O.U.P.); Henshaw, *New Testament Literature* (Hodder & Stoughton); C.K. Barrett, *The New Testament Background: Selected Documents* (Harper).

Further Readings: F. F. Bruce, *The New Testament Documents* (Eerdmans); Bultmann and Kundsinn, *Form Criticism* (Harper); Vermes, *The Dead Sea Scrolls in English* (Penguin).

218F Theology of Religions. Full Course.

G. O'Brien

A consideration of the basic religious attitudes and postures of primitive man and of the nature and role of religion in his life. An attempt will be made to assess the contribution of the religion of primitive man to the great historical religions.

Lectures: 3 hours per week for two terms.

Texts: Allport, *The Individual and His Religion* (Macmillan); Eliade, *Patterns in Comparative Religion* (Meridian); Eliade, *The Sacred and the Profane* (Torchbook); Eliade, *Cosmos and History* (Torchbook).

Further Readings: Schlette, *Towards a Theology of Religions* (Palm); James, *The Ancient Gods* (Weidenfeld & Nicolson); Frankfort, *Kingship and the Gods* (Univ. of Chicago); Hook, ed., *Myth Ritual and Kingship* (Oxford); James, *Sacrifice and Sacrament*, (Thames & Hudson); James, *The Cult of the Mother Goddess* (Thames & Hudson); and others to be announced... Radin, *Primitive Religion* (Dover); *Primitive Man as Philosopher* (Dover).

219 Theology of Judaism. Full Course. Rabbi D. Hartman

This course aims to explore the various notions of God as they emerge in Biblical, Prophetic, Rabbinic, Medieval and Contemporary thought. Careful analysis will show how ideas of God have influenced various approaches to the concepts of man, revelation, idolatry, freedom and the problem of evil.

Emphasis will be placed on seeing how Jewish Theology has grown from the interaction with human history. Attention will be focussed on such basic issues as: Dogmatic and situational theology; Revelation and human reason; obedience and human reason; obedience and human freedom; ontology and law; cognitive and experiential notions of faith.

Lectures: 3 hours per week for two terms.

Readings will be from: Bible - Genesis, Exodus and Deuteronomy; Hoseah, Micah, Amos, Isaiah; the Book of Job; readings in talmudic thought; medieval philosophy - Maimonides - Guide for the Perplexed, and Mishnah Torah; Contemporary humanistic and existential thought - Buber, Rosenzweig, Heschel, Fromm and Soloveitchik.

243 The Converging Traditions (Ecumenical Theology).

Full Course.

P. Jones

An historical and theological approach to the rise of the great traditions within Christianity. The Eastern schism and the peculiar genius of Eastern Christianity. The Protestant Reformation, its causes, leaders, theology. Modern developments in the Roman tradition. Problems of the eventual reunion of these widely diverse traditions.

Lectures: 3 hours per week for two terms.

Texts: Elton, *Reformation Europe*, (Fontana pb.); Schmemmann, *The Historical Road of Eastern Orthodoxy*, (Logos pb.); Küng, *The Council, Reform, and Reunion*, (Sheed and Ward pb.).

262 Issues in Christian Anthropology. Full Course.

S. Wesolowsky

A study of a number of structures of human existence and their interrelations, not only in their individual aspects, but also in their social and historical dimensions. The play, work, sexual and political elements of man's existence will be emphasized.

Lectures: 3 hours per week for two terms.

Texts: J. Huizinga, *Homo Ludens* (Beacon pb.); H. Marcuse, *Eros and Civilization* (Vintage pb.); M. Oraison, *The Mystery of Human Sexuality* (Sheed and Ward); K. Mannheim, *Ideology and Utopia* (A Harvest pb. Book pb.).

Further Readings: Seidel, *Martin Heidegger and the Pre-Socratics* (Nebraska); E. Voegelin, *The New Science of Politics* (Chicago).

THEOLOGICAL STUDIES (Christian context)

210A Image of Man. Full Course.

C. H. Henkey

The course is a religious anthropology which intends to sound and to explore the mystery of human existence in its personal, social and dynamic structure. The qualification 'religious' implies that man's ultimate rootedness and orientation towards God will be discussed.

Lectures: 3 hours per week for two terms.

Texts: Teilhard de Chardin, *Phenomenon of Man* (Torchbook); Heschel, *What is Man?* (Stanford); Rahner, *Hominisation* (Herder & Herder pb.); Eliade, *Cosmos and History* (Torchbook).

Further readings: Haring, *Law of Christ I* (Mercier); Scheffczyk, *Man's search for himself* (Sheed & Ward); Lecomte du Nouÿ, *Human destiny* (Mentor); Jaspers, *Man in the modern age* (Doubleday Anchor); Jung, *Modern man in search of a soul* (Harvest pb.).

218F Theology of Religions. Full Course.

G. O'Brien

A consideration of the basic religious attitudes and postures of primitive man and of the nature and role of religion in his life. An attempt will be made to assess the contribution of the religion of primitive man to the great historical religions.

Lectures: 3 hours per week for two terms.

Texts: Allport, *The Individual and His Religion* (Macmillan); Eliade, *The Patterns in Comparative Religion* (Meridian); Eliade, *The Sacred and the Profane* (Torchbook); Eliade, *Cosmos and History* (Torchbook).

Further Readings: Schlette, *Towards a Theology of Religions* (Palm); James, *The Ancient Gods* (Weidenfeld & Nicolson); Franckfort, *Kingship and the Gods* (Univ. of Chicago); Hook, ed., *Myth Ritual and Kingship* (Oxford); James, *Sacrifice and Sacrament* (Thames & Hudson); James, *The Cult of the Mother Goddess* (Thames & Hudson); and others to be announced... Radin, *Primitive Religion* (Dover); *Primitive Man as Philosopher* (Dover).

220F Biblical Theology. Full Course.

A. J. Webster

The Nature of Faith in the Old and New Testaments. A study of the act of faith from the obedient faith of Abraham to the Pauline faith working in charity, man's response to divine revelation offering him the gift of divine adoption.

Lectures: 3 hours per week for two terms.

Texts: *The Oxford Annotated Bible with Apocrypha* (Oxford); *Faith, Reason, and Gospels* (Newman).

Further Readings: Selections to be announced.

224F God of the Covenant. Full Course.

W. Bedard

God as he manifests himself and his design for mankind in the Sinai Covenant. Man's response to God's design: the Covenant accepted, broken repeatedly, and renewed repeatedly. Man's response in Christ: the fulfilment of the Covenant in Christ and his members, the true People of God. The sacraments and Christian living within the Covenant. Protestant thought on the Covenant.

Lectures: 3 hours per week for two terms.

Texts: *The Jerusalem Bible* (Doubleday); Salm (ed.), *Studies in Salvation History* (Prentice-Hall); Abbott (ed.), *The Documents of Vatican II* (Angelus).

Further Readings: Mackenzie, *Faith and History in the Old Testament* (Macmillan); Oesterreicher, *The Israel of God* (Prentice-Hall); Eichrodt, *Theology of the Old Testament, Vol. I* (Westminster); Anderson, *Understanding the Old Testament, 2nd ed.* (Prentice-Hall); Giblett, *The God of Israel, the God of Christians* (Deus); Canisius (ed.) *The Word: Readings in Theology* (Kenedy); Tavard, *Understanding Protestantism* (Deus); selected periodical literature.

228F Culture and Theology. Full Course. R. Barberis

In this course, the insights of modern authors will be considered as the source of a concrete understanding of Christian values. Through plays, novels, and essays, we will attain an awareness of human problems and realize how the human condition may be open to the Christian faith and hope.

Lectures: 3 hours per week for two terms.

Texts: *The Oxford Annotated Bible with Apocrypha* (Oxford); *The Documents of Vatican II*, (Guild Press); others to be announced.

Further Readings: to be announced.

232F Theology as Salvation History. Full Course. M. Spicer

We will explore a theology of history that engages human creativity. The course will emphasize the uniqueness of Christianity in contrast to Idealism. Within the context of biblical Christian faith, Salvation History does not escape history but faces up to it challenging our contemporary technological society.

Lectures: 3 hours per week for two terms.

Texts: Heschel, *Who is Man?* (Stanford); Eliade, *Cosmos and History* (Chicago pb.); Rust, *Towards a Theological Understanding of History* (Oxford); Altizer, *The Gospel of Christian Atheism* (Westminster pb.); Maslow, *The Psychology of Being*, (Van Nostrand pb.); Arendt, *Between Past and Future* (Meridian pb.).

Further Readings: to be announced and selections to be handed out.

236F Cosmic Dimensions of Theology. Full Course. F. Sawyer

The cosmic values of man involves an awareness of who man is. Working on the presupposition that visible symbols are basic to man's structure, we then proceed to an understanding of this world and therefore an encounter through it with Christ and the universal sacrament, the Church.

Lectures: 3 hours per week for two terms.

Texts: Schillebeeckx, *Christ the Sacrament* (Sheed & Ward); *The Oxford Annotated Bible with Apocrypha, R.S.V.* (Oxford).

Further Readings: Rahner, *The Church and the Sacraments* (Herder & Herder); Danielou, *The Bible and the Liturgy* (Notre Dame); Eliade, *The Sacred and the Profane* (Torchbook); Eliade, *Cosmos & History* (Torchbook); Journet, *The Meaning of Grace* (Kenedy); Tournier, *The Meaning of Persons* (S.C.M.); Merton, *Disputed Questions* (Farrar, Straus & Cudahy).

238F Theology of Worship. Full Course. J. E. Collins

A study of the self-realization of the Christian through the liturgy. The purpose of the course will be to deepen our understanding and living of the Christian reality by a study of the ways we encounter God, here and now, through Christ in the Church, the Mass and the Sacraments.

Lectures: 3 hours per week for two terms.

Texts: Dalmis, *Intro. to the Liturgy* (Helicon); Davis, *Liturgy and Doctrine* (Stagbooks); Abbot, ed., *The Documents of Vatican II* (Angelus); Jungmann, *The Sacrifice of the Church* (Burns & Oates pb.); Jungmann, *The Eucharistic Prayer* (Burns & Oates pb.); Fransen, *Divine Grace and Man* (Mentor-Omega).

Further Readings: Bouyer, *Liturgical Piety* (Notre Dame); Schillebeeckx, *Christ the Sacrament of the Encounter with God* (Sheed & Ward pb.); K. Rahner, *The Church and the Sacraments* (Burns & Oates pb.); selected articles and other readings to be announced.

240 The Christian Meaning of the Old Testament.

Full Course.

B. J. Sloan

Full initiation to the MYSTERY of CHRIST as it was prepared, announced, and prefigured in the Old Testament. A salvation-history approach to the Scriptures as demanded by the recent decrees of Vatican II. Christ as the heart and culminating point of revelation.

Lectures: 3 hours per week for two terms.

Texts: *The Oxford Annotated Bible with Apocrypha* (Oxford); Giblet, *The God of Israel, God of Christians* (Desclee); Lupton, *A Guide to Reading the Bible* (S & W Stagbook).

Further Readings: Eichrodt, *Theology of the Old Testament* (SCM Press); Von Rad, *Old Testament Theology 2 vol.* (Harper); Eissfeldt, *Theology of the Old Testament* (Harper); Grelot, *Sens Chrétien de l'Ancien Testament* (Desclee); Anderson, *Understanding the Old Testament* (Prentice); Childs, *Memory and Tradition in Israel* (SCM); Kümmel, *Promise and Fulfilment* (SCM); Cullmann, *The Christology of the New Testament* (SCM); Wright, *The God Who Acts* (SCM). Other selections to be announced.

243F The Converging Traditions (Ecumenical Theology).

Full Course.

P. Jones

An historical and theological approach to the rise of the great traditions within Christianity. The Eastern schism and the peculiar genius of Eastern Christianity. The Protestant Reformation, its causes, leaders, theology. Modern developments in the Roman tradition. Problems of the eventual reunion of these widely diverse traditions.

Lectures: 3 hours per week for two terms.

Texts: Elton, *Reformation Europe*, (Fontana pb.); Schmemmann, *The Historical Road of Eastern Orthodoxy* (Logos pb.); Küng, *The Council, Reform and Reunion* (Sheed and Ward pb.).

246F Theology of the Church. Full Course.

W. Browne

A study of the meaning of the Church from its foundation, as seen especially in the Gospel of Matthew, and the Epistle to the Ephesians, to the most complete reflection of the Church on her own nature in Vatican II's Constitution on the Church. A reading of the documents of Vatican II will be part of the Course.

Lectures: 3 hours per week for two terms.

Texts: Stanley, *The Gospel of St. Matthew* (New Testament Reading Guide no. 4, Liturgical Press); Sullivan, *Letter to the Ephesians* (New Testament Reading Guide no. 9, Liturgical Press); Abbott, ed., *The Documents of Vatican II* (Angelus).

254F Christocentric Theology. Full Course. J. Hofbeck

Two fundamental questions — christocentrism as a methodological problem and christocentrism in the major dogmatic issues — will be examined in a historical and systematic perspective, implemented by practical applications to problems of modern life.

Lectures: 3 hours per week for two terms.

Texts: Balthasar, *Karl Barth* (Rinehart & Winston); Cerfaux, *Christ in the Theology of St. Paul* (Herder & Herder); Karl Rahner, *Theological Investigations I* (Helicon).

Further Readings: to be announced.

256F Introduction to Theological Ethics. Full Course.

B. Somfai

Facing the challenge of secularism, the course intends to highlight the fundamentals of Theological Ethics. First it includes a historical, philosophical and biblical analysis of the moral experience. Then it proceeds in explaining the fundamental principles of Christian moral life as they derive from our vocation in Christ.

Lectures: 3 hours per week for two terms.

Texts: Haring, *Christian Renewal in a Changing World* (Desclee, 4th ed.); Haring, *Toward a Christian Moral Theology* (Univ. of Notre Dame); Schnackenburg, *The Moral Teaching of the New Testament* (Palm); Lepp, *The Authentic Morality* (McMillan); Liege, *What is Christian?* (Deus); Tillich, *Morality and Beyond* (Harper Torchbook); Bergson, *The two sources of Morality and Religion* (Doubleday Anchor).

262F Issues in Christian Anthropology. Full Course.

S. Wesolowsky

A study of a number of structures of human existence and their interrelations, not only in their individual aspects, but also in their social and historical dimensions. The play, work, sexual and political elements of man's existence will be emphasized.

Lectures: 3 hours per week for two terms.

Texts: Huizinga, *Homo Ludens* (Beacon); H. Marcuse, *Eros and Civilization* (Vintage); Orison, *The Mystery of Human Sexuality* (Sheed and Ward); Mannheim, *Ideology and Utopia* (A Harvest Book).

Further Readings: Seidel, *Martin Heidegger and the Pre-Socratics* (Nebraska); Voegelin, *The New Science of Politics* (Chicago).

SPECIAL COURSES (Prerequisite: the successful completion of either Theology 210A or of a General Course).

318 The Theology of Newman: Contents and Analysis of Faith. Full Course.

A. J. Webster

A study of Newman's contribution to the analysis of the act of faith in terms of a personalistic philosophy which is even more pertinent today in the light of the emphasis by Vatican II on the personal aspects of faith.

Lectures: 3 hours per week for two terms.

Texts: *Grammar of Assent* (Image); *Development of Christian Doctrine* (Image); *Heart of Newman* (Palm).

Further Readings: Selections on faith will be chosen.

324 Theology of Prayer in the Psalms. Full Course.

W. Browne

A study of the historical setting, structure, and significance of the Psalms for those of the Jewish-Christian tradition, with special emphasis on the Passover and Paschal Mystery.

Lectures: 3 hours per week for two terms.

Texts: George, *Praying the Psalms* (Fides pb.); *The Psalms, Singing Version* (Fontana pb.); *The Oxford Annotated Bible* (Oxford).

Further Readings: Lewis, *Reflections on the Psalms* (Fontana pb.); Weiser, *The Psalms* (Westminster); Ellis, *The Men and Message of the Old Testament* (Liturgical Press); Ryan, *Key to the Psalms* (Fides); Barth, *Introduction to the Psalms* (Scribner Studies in Biblical Interpretation).

325 The Reality of God. Half Course.

W. Bedard

Certain images of God are being questioned as remote from a scientific age, or an urbanized society, or an anguished world. Correspondingly, there is a new interest in "the compassionate Christ". The course will evaluate these trends in the light of God's self-revelation that culminated in Christ.

Lectures: 3 hours per week for the first term.

Texts: Murray, *The Problem of God* (Yale); Gleason, *The Search for God* (Sheed and Ward); *The Jerusalem Bible* (Doubleday).

Further Readings: To be announced.

326 The Theology of Adoptive Sonship. Half Course.

W. Bedard

What is the full meaning of the oft-repeated statement that we are "sons of God"? An answer to this question will be sought in the Bible, in the writings of the Fathers of the Church, and in the documents of Vatican II.

Lectures: 3 hours per week for the second term.

Texts: *The Jerusalem Bible* (Doubleday); Fransen, *Divine Grace and Man* (Mentor paperbacks).

Further Readings: To be announced.

333 The Church: Conflict and Growth. Full Course.

G. O'Brien

The focal point will be the emerging concept of the Church, departing from Vatican II, considering the urge to be contemporary and the need to be traditional — the drama of the declaration of Papal Infallibility in the century of Liberalism and Nationalism, her distrust of modern democratic liberties in the emerging secular state, the rise of Protestantism, tolerance and freedom in a changing world, the dissolution of the basic medieval concepts, the great Schism and the contribution of the early general councils.

Lectures: 3 hours per week for two terms.

Texts: Rahner, *Free Speech in The Church* (S & W); Fries, *Aspects of the Church* (Newman); Williams, *Faith in a Secular Age* (Fontana); *Documents of Vatican II*, (Palm); Butterfield, *Christianity & History* (Fontana).

Further Readings: Murray, *The Problem of God* (Yale); Rahner, *The Dynamic Element in the Church* (Palm); Hazard, *European Thought in the Eighteenth Century* (Meridian); Butler, *The Idea of the Church* (Helicon); Hastings, *One and Apostolic*, (Darton); Kung, *Structures of the Church* (Nelson); Mergeler, *Mutations in Western Christianity* (Palm); and others to be announced.

337 Beginnings of Christian Thought. Full Course.

F. Sawyer

The focal point will be a historical approach to the Fathers and Ecclesiastical Writers of the early Church. Selected readings will illustrate their significance in doctrinal development as well as their importance in modern day problems of change. Lectures: 3 hours per week for two terms.

Text: Dirksen, *Elementary Patrology* (B. Herder).
Further Readings: Altaner, *Patrology* (Herder & Herder); Danielou-Marrou, *The First Six Hundred Years* (McGraw-Hill); Kelly, *Early Christian Doctrines* (Harper); *Selected Readings from Ante-Nicene, Nicene and Post Nicene Fathers* (Eerdmans); Quasten, *Patrology* (Spectrum).

338 Marriage. Full Course.

J. Collins

An historical and sacramental approach with an awareness of the contributions other sciences make to the understanding of the human reality of marriage, e.g., medicine, sociology, psychology, and philosophy. These are important considerations, for the human actions of married people are essential to the sacramental reality of Christ's presence in the world through the incarnation of his love and revelation of himself in the sacrament of matrimony. The course will be concerned with deepening our understanding of the mystery of love which is Christian marriage along with and investigation of the challenges facing those preparing for and beginning married life.

Lectures: 3 hours per week for two terms.

Texts: Schillebeeckx, *Marriage Secular Reality and Saving Mystery*, Vol. I & II (Stagbooks); Von Hildebrand, *Man and Women* (Logos); Von Gager, *Marriage Partnership* (Newman).

Further Readings: *Pastoral Constitution on the Church in the Modern World*; Riker, *Understanding Marriage* (Deus); Noonan, *Contraception* (Harvard); Oraison, *Man and Wife* (Crowell-Collier pb.); Suenens, *Love & Control* (Burns Oates pb.); Fromm, *Art of Loving* (Harper pb.); Lepp, *The Psychology of Loving* (Helicon pb.); Marcel, *Homo Viator* (Harper pb.); selected articles and other readings to be announced.

341 Son of Man and Son of God. Full Course. P. W. Jones

A Biblical and Theological investigation into the more central aspects of the mystery of the Christ. The Incarnation and its implications. Christ's life, death, and resurrection as the visible, sacramental expression in the world of God's saving purpose. Recent developments in Protestant and Catholic thinking on the person of Christ.

Lectures: 3 hours per week for two terms.

Texts: *The Oxford Annotated Bible with Apocrypha* (Oxford); Durrwell, *The Resurrection*, (Sheed and Ward pb.); Rahner, *Hominisation*, (Herder & Herder pb.); Grossouw, *Revelation and Redemption* (Chapman pb.).

345 The Problem of Evil. Full Course. S. Wesolowsky

An exploratory course that will treat the problem of evil both historically and thematically: historically, by considering occurrences of various modes of speaking about evil, thematically, by considering the methodological issues involved in the legitimacy, relevance and dynamics of such an inquiry.

Lectures: 3 hours per week for two terms.

Texts: St. Augustine, *City of God* (abridged edition, Image); M. Buber, *Good and Evil* (Scribner); C. Journet, *The Meaning of Evil* (Kenedy); Ricoeur, *Fallible Man* (Gateway); Schoonenberg, *Man and Sin* (Sheed and Ward).

Further Readings: Kierkegaard, *The Concept of Dread* (Princeton); Ricoeur, *La Symbolique du Mal* (Aubier); von Balthasar, *Le Chrétien et L'Angoisse* (Desclée de Brouwer).

351 The Theological Context of Soren Kierkegaard.

Full Course.

M. Spicer

The course entails: a) an historical introduction to Kierkegaard's notion of Christianity in which selected readings from such authors as Kant, Fichte, Schleiermacher, Hamann, Lessing, Hegel, Strauss and Feuerbach will be studied; b) Kierkegaard's position as to the qualitative contrast between Idealism and Christianity and the place of the imagination in the Christian human experience; c) a contemporary assessment of Kierkegaard's theological position.

Lectures: 3 hours per week for two terms.

Texts: Mackintosh, *Types of Modern Theology* (Fontana pb.); Kierkegaard, *Philosophical Fragments* (Princeton); Paul Tillich, *Perspectives on 19th & 20th Century Theology* (Harper & Row); Dupré, *Kierkegaard as Theologian* (Sheed & Ward pb.).

Further Readings: to be announced and selections to be handed out.

355 La signification théologique de l'oeuvre de Georges Bernanos. R. Barberis

L'imagination poétique d'un écrivain comme Bernanos s'exprime en des thèmes concrets qui cristallisent des réseaux de signification dont la résonance chrétienne est remarquable. La valeur littéraire des romans et la vigueur des prises de position des essais favorisent une prise de conscience des problèmes qui se posent à l'homme de foi à l'intérieur de l'Eglise et du monde moderne.

3 heures par semaine pendant deux semestres.

Textes: *Journal d'un curé de campagne*, (Livre de poche Université); *Les grands cimetières sous la lune*, (Livre de poche); *Dialogues des Carmélites*, (en poche: Livres de Vie); Béguin, *Bernanos par lui-même*, (Seuil); Urs von Balthasar, *Le chrétien Bernanos*, (Seuil).

Lectures: Toutes les oeuvres de Bernanos; Moeller, *Littérature du XX^e siècle et christianisme T. I*, (Casterman); Hatzfeld, *Trends and Styles in Twentieth Century French Literature*, (The Catholic University of America Press); Blanchet, *Le prêtre dans le roman d'aujourd'hui*, (DDB); de Fabrégues, *Bernanos tel qu'il était*, (Mame).

357 Soteriology — The meaning of salvation. Full Course.

J. Hofbeck

Starting from our common understanding of salvation, our task will be to work out a strictly theological concept of salvation and to examine the modern problems it raises. Particular considerations: the historical, anthropological, christological, sacramental and ecclesiastical structure of salvation and the relationships existing between these different aspects.

Lectures: 3 hours per week for two terms.

Texts: To be announced.

Further Readings: To be announced.

370 Catholic Worship in Renewal.

B. J. Sloan

A detailed study of the structures, formation, and MEANING of Catholic Worship as a witness to the Church's FAITH. The law of prayer as the law of belief. Classic forms of worship and sacramental practice in the Liturgical books. The meaning and need of the present liturgical reform. An attempt to approach the heart of Christian Living.

Lectures: 3 hours per week for two terms.

Texts: *St. Andrew BIBLE Missal*; Martimort, *Signs of the New Covenant* (Liturgical Press); Abbott, *The Documents of Vatican II* (America); Cullmann, *Early Christian Worship* (SCM); Sloyan, *Worship in a New Key* (Image pb.); Davis, *Liturgy and Doctrine* (Sheed and Ward, pb.).

Further Readings: Palmer, *The Sources of Christian Theology* (Newman); Jungmann, *Public Worship* (Palm); Häring, *The New Covenant-Sacramental Spirituality* (Palm); Vagaggini, *Theological Dimensions of the Liturgy* (Liturgical Press); *The Liturgy and the Word of God* (Liturgical Press).

ADVANCED COURSES

(Individually directed research for honours, majors and advanced students who have passed one of the general courses. Acceptance by respective Professor and clearance with Chairman is mandatory).

415 Studies in Modern Theologians. (Balthasar, Barth, Przywara, de Lubac). Full Course.

S. Wesolowsky

420 Modern Aspects of New Testament Theology.

Full Course.

A. Webster

425 New Testament Studies (Johannine and Pauline Theology). Full Course.

W. Bedard

430 Patristic Studies. Full Course.

F. Sawyer

435 New Testament Studies. (Problems of Interpretation). Full Course.

P. Jones

440 Theological impact of contemporary literature. Full Course.

R. Barberis

445 Psychology of Religion. Full Course.

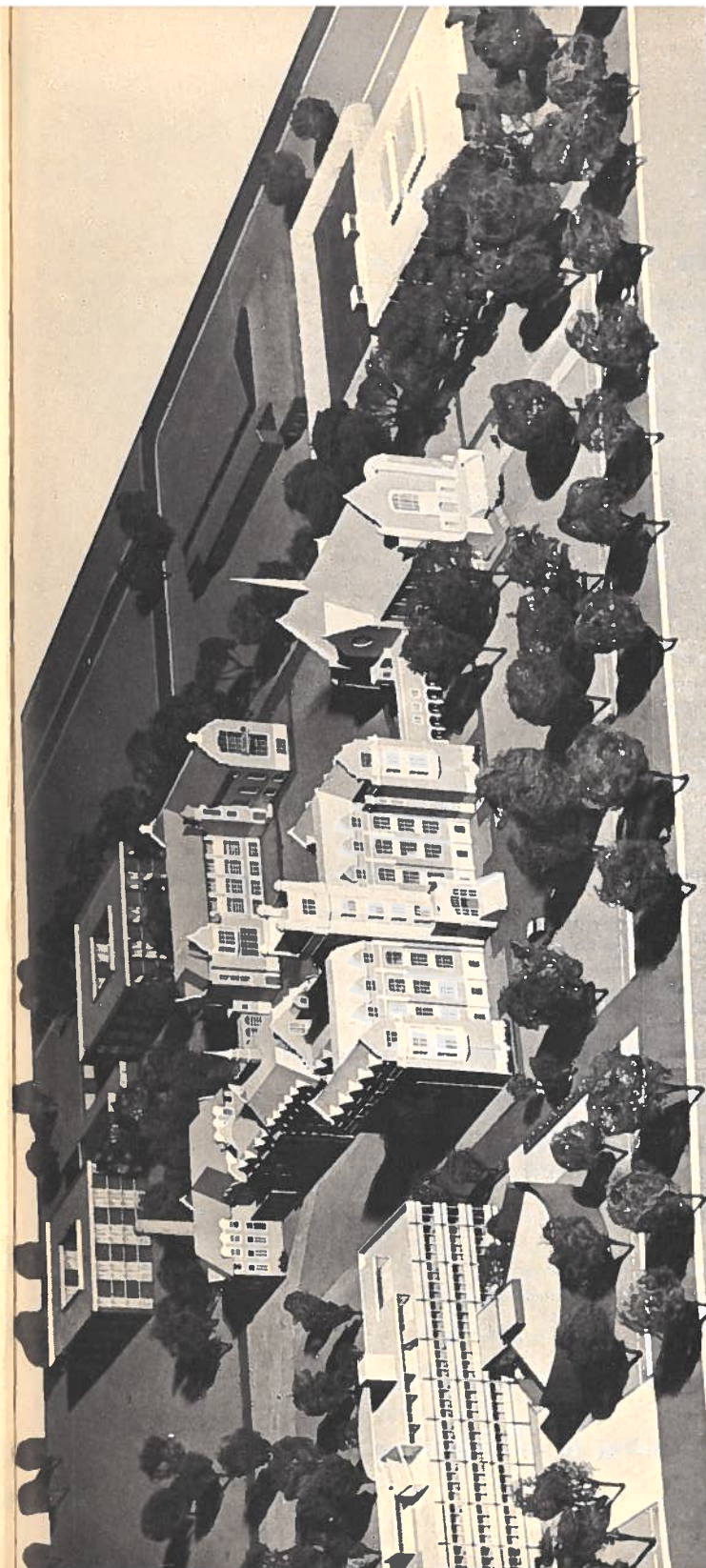
M. Spicer

450 Comparative Religion (Special question: Sin). Full Course.

G. O'Brien

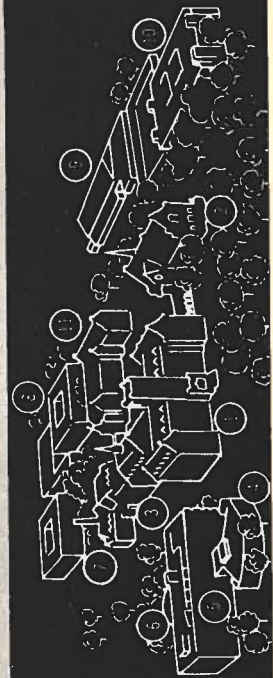
452 Modern Ecclesiological Problems. Full Course.

G. O'Brien



1 Administration Building • 2 Chapel • 3 Central Building
 4 Drummond Science Auditorium • 5 Science Building • 6 Science Library
 7 Refectory Building • 8 Hingston Hall (Residence) • 9 Maintenance
 10 Georges P. Vanier Library • 11 Junior Building

Not shown on photo of campus model: New Classroom Building, Women's Residence, Students Union, Faculty Residence, Engineering Building, Athletic Centre.



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 130 Major in French
 142 Major in History
 157 Major in Philosophy
 167 Major in Political Science
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